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## ELEMENTS OF METALLURGY;

A PRACTICAL TREATISE ON THE ART OF EXTRACTING METALS FROM THEIR ORES.

By J. ARTHUR PHILLIPS, M. Inst. C.E., F.G.S., F.C.S., &c.,

Ancien Elève de l'Ecole des Mines, Paris; Author of "Mining and Metallurgy of Gold and Silver," &c.

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### Meetings of Public Companies.

#### ST. JOHN DEL REY MINING COMPANY.

The annual general meeting of shareholders was held at the London Tavern, on Wednesday.—Mr. JOHN HOCKIN in the chair. The notice convening the meeting was read. The directors' report (which has already appeared in the Journal) was taken as read.

The CHAIRMAN said—When we last had the pleasure of meeting you we had just reached the great Morro Velho lode at one of the points intended, and ascertained that its appearance at that point was quite what we expected it would be, though from the small quantity of ore that had been quarried we could not then report on its actual yield in the stamping-mills. We subsequently reached the lode, as originally planned, by the other shaft. Up to the date of the last advices we have quarried and stamped 10,935 tons of ore, the yield of which has been, I may say, better than we expected from the part of the lode we have been at work on. As we got more into the body of the lode, and away from the mixed outer covering, the quality of the ore steadily improved. November, December, and January gave respectively 5.5, 6.7, and 7.7 oits. per ton, whilst February, March, and April gave an average of 8.4 oits., or within a small fraction—about 3 per cent.—of 1 oz. troy per ton of mineral stamped. Most strenuous efforts have been made by the mine staff to enlarge the excavations, and get them into a favourable state for more extensive operations as rapidly as possible, but as the work has consisted chiefly of driving and sinking in a rock excessively hard to quarry, the progress has been necessarily rather slow. I need hardly say that men employed in driving and sinking cannot break more than one-half the quantity of rock that they can when regular stopes have been formed. The work in the A excavation has now for the first time been performed by contract, under which the contractors pay for all materials and labour, thereby giving the contractor an interest in his work, and an inducement to exertion which he would not otherwise have, and at the same time ensuring economy in the use of materials. The only explosive used is dynamite, which the miners find the most effective, and are now very partial to, and as we ship it direct from Hamburg to Rio we are not subject to the annoying and expensive restriction, amounting in some cases to prohibition, that mine owners in this country are. To give the meeting an idea of the space opened out, as compared with the whole body of the lode as existing at the bottom of the old excavation when last worked on, we have had a rough sketch made, which is on the mantelpiece on your left, on which is shown in dark shading the dimensions of both excavations from measurements taken on May 1. You will see from this that the lode has been removed throughout its whole width in the A excavation, but that in the B excavation, which is some 20 feet below the A, the north wall has not been reached; and judging from the plan it may be several feet off yet. By the last advices we learn that, besides the sinking in the stimp of A shaft, sinking has also been commenced further west in that excavation, with a view to open free communication between the two excavations. This, when completed, will increase the means of output at the B shaft, by enabling the ore broken in the A excavation to be passed into the B excavation, and up that shaft, through which at present we can only draw the small quantity of ore quarried therein. We also learn by the last letters that 137 kibles were daily being drawn to surface through both shafts, which, if maintained, would give about 100 tons of ore daily for the stamps throughout the month. Preparations are also being made for putting the guides and cages into the B shaft, which is to be the permanent hauling shaft, so as to increase the hauling-power, and make it more safe and secure. As the opening out progresses, and more space is obtained, the output will increase, but full duty will only be attained when we can get the lode quarried through its entire length from east to west. Mr. Gordon, writing on this subject on May 16, says:—

"We are now working earnestly to effect a free communication between the two excavations, and when that is accomplished, and the shaft B fitted with the proposed arrangements for the use of the hauling cages, there will be some reason to hope for a very considerable increase in the output of mineral. If the lode continues to give the same quality of mineral as we have been raising during the past few months we should be able to show greatly increased profits, if not rapidly at least certainly in proportion to the mineral brought to the stamps. We must expect some little delay in having the hauling arrangements prepared and completed in the B shaft, but, that being done, our progress should be steady and very considerable, both as regards produce and profit."

The proprietors are aware that the re-opening of the mine by means of these vertical shafts necessitated the erection of much new machinery, and the removal of some of the old machines from their former sites. In order to conduct the future permanent work of the establishment in the most economical way, by substituting machine for manual labour, we have still some work of this nature on hand. The stone-breaker (Blake's patent) is being removed to a fresh site, and arrangements will be made to work a second of these useful machines by means of the same turbine hitherto in use for that purpose. The necessary motor, air-compressor, and machines are already on the spot for introducing machine boring, and the erection of these will be set about without delay. A small second-hand pumping-wheel is also being erected to lift the water from the western part of the old excavation, with a view to economise water now passing over a larger pumping-wheel hitherto temporarily performing this duty. Surveys are also being made with a view to see if it may not be practicable permanently to increase the water supply. If this can be accomplished it will greatly add to the value of your property by increasing the power of reducing large quantities of ore continuously throughout the year, and the labour-saving machinery when in full operation will ensure its being done at the least possible cost. All difficulty as regards the drainage of the old excavation, and conveying the water to the pumps in the new shafts, has been satisfactorily overcome by the very convenient arrangement of the bore-hole and tap, referred to in the report. By this means the new excavations will be kept much freer from water than is usual in most deep mines. As regards finance, I need not say much to you; the figures in the report speak for themselves, and will, I think, assure you that the company is in this respect in a thoroughly healthy condition; I may add we believe it to be so in every other respect. You will not doubt have seen by the public papers that telegraphic communication is about to be established with Brazil, and the directors would like an opinion from the meeting as to whether the company should go to the expense or not of regular telegrams. The directors themselves think that in the interests of the company the advantages derived from periodical telegrams of produce, &c., are not equivalent to the expense; on any sudden emergency they would, of course, receive them; they will, however, be quite ready to act on the suggestion of the meeting on the subject, presuming that the expense is not very great.

A SHAREHOLDER asked what would be the expense of the telegrams? The CHAIRMAN thought by having telegrams in cypher it might cost about 5s. per month.

Mr. S. HERAPATH thought the expense should not be considered, because if

official telegrams were not forwarded, the necessary information would be obtained by private parties.

Sir JOHN SWINBURNE looked upon the shareholders in the St. John del Rey Company as permanent investors, and were not speculators. The mine as had been often said, possessed ore that is practically inexhaustible, and telegrams, especially in cypher, were as often misleading as otherwise; mail letters were now received every 10 days, and it was only a month's sail from Rio de Janeiro. Private individuals might obtain telegrams, but confidence could be reposed in the directors that any feature of importance should be made known to the shareholders as soon as it could be obtained through any other source. As to the water supply, he thought this meeting should strengthen the hands of the board in preparing for the expenditure of a considerable sum of money in permanently increasing that supply. He found in the report it was stated that "these arrangements may be said to be in good order, but the water-wheel can hardly keep them all at proper speed when the amalgamation-house machinery is in motion." They were now raising 100 tons of ore per day, which might be increased; but it was a mere matter of power whether they raised 100 or 800 tons, and he thought the directors should be requested to commence the necessary arrangements for the laying out of reservoirs. At the last meeting the question was raised of voting some substantial acknowledgment to the management in London and the Brazil for their able services during the late most trying and anxious period. In furtherance of that idea, he would throw out as a suggestion that when the company resumed dividends so many days' pay should be given to whatever officers were deserving of it.

Mr. TENDRON supported the suggestion that telegrams should be sent home, and that there should be some official cyphers, so as false telegrams could not be published. If he understood the position of the mine, the question of water supply did not arise at present, but it was solely a question of stopping the mineral. He noticed in the Chairman's remarks that the men were doing certain work by contract, providing their own material—if that included the timbering he hoped there was the closest supervision, and he would ask the Chairman whether he was perfectly satisfied not only of the permanent duration of the lode, but also of the security of the roof of the mine and the surface works?

A SHAREHOLDER asked when a dividend would be declared?—The CHAIRMAN said the first dividend would be paid whenever they got enough money to do so. As to the question of water-power, he must confess he went very far with Sir John Swinburne. The output was being rapidly increased, and by the end of next year it would be more than doubled, and if they did not begin about increasing the water-power how were they to dress that ore? It may take two or three years to get the water-power on the mine, and if they did not begin at once they would find themselves with large quantities of ore, but unable to dress it. They had now to send the water down to the waterworks and bring it back again, in which operation a quantity was lost; they had the same quantity of water as formerly, but could not apply it so effectively. He thought before long shareholders would have to make up their minds to incur some expense with regard to water-power; they had always suffered in dry seasons from want of water, and as most likely they would raise more ore than formerly, it was an important point to be prepared with ample water-power. It would not cause a very great immediate expense, and could be included in the monthly cost.

Sir JOHN SWINBURNE said the dam must be made extremely slow, therefore they should begin to look to it at once.

The CHAIRMAN, in reply to a question as to the work that was being done by contract, stated that it was confined entirely to stopping, boring, and raising mineral; timbering was altogether another matter. He believed all the works were perfectly safe, and arrangements would be made to timber heavily under the roof. As to the quantity of ore, although probably inexhaustible, he did not go so far as Sir John Swinburne, that they would be able to raise 800 tons a day; they might get up to 200 or 250 tons, but very much beyond that they could not go.

The report and accounts were received and adopted. Mr. Illingworth was re-elected director.

Mr. HERAPATH proposed that the board be instructed to have telegrams forwarded from the mine at their discretion, which was seconded by Mr. TENDRON. Sir JOHN SWINBURNE proposed, as an amendment, that the question be adjourned till the next meeting, which was seconded by Mr. FALCKE.

Upon being put the amendment was lost, when the motion was put and carried. Upon the proposition of Mr. HERAPATH, seconded by Mr. LATCHMORE, it was unanimously resolved that the meeting desire to express to Mr. Gordon and the heads of departments its appreciation of the zeal, ability, and energy with which they have discharged their several duties.

Mr. TENDRON suggested that the board, in communicating that vote, might incidentally mention that the feeling of the meeting was quite in favour of a more substantial recognition when the right time came.

A vote of thanks to the Chairman and directors terminated the proceedings.

#### LONDON AND CALIFORNIA GOLD MINING COMPANY.

An extraordinary general meeting of shareholders was held at the Cannon-street Hotel, on Tuesday.

Mr. LEWIS R. PRICE in the chair.

Mr. SAUL (the secretary) read the notice convening the meeting.

The CHAIRMAN said that before entering into the subject of the meeting he would read the telegrams which had been received from the mine. They would remember that on June 6 they received a telegram announcing an important discovery in the vein. By the 10th, however, some change had taken place, in consequence of which those at the mine sent a second telegram, stating that the vein was less favourable, but that the prospects were still good. He presumed that they considered it necessary to correct as soon as possible any false impression that the first telegram might have created, seeing that the discovery was not permanently so valuable. On June 13 they received a third telegram, stating that the prospect was better for the shaft, and that the vein maintained its size and good quality, but that time would be required for its development. Since that time no information had been received. It was unnecessary for him to point out that until the ore had been perforated to a considerable depth they could not speculate upon what the vein would turn out, but this was the first time they had got anything of importance. They had got a little ore of \$18 or \$20, but the ground appeared bumpy. The shareholders would bear in mind that the directors had suggested that, owing to the peculiar circumstances in which they were placed, a committee of shareholders should be formed to act with the directors, and take any legal steps or make any enquiries that might be necessary. The directors, on their part, had submitted all the information they had. There had been, however, great difficulty in finding shareholders willing to undertake the somewhat unthankful task. Recently, however, Mr. Percival Smith had succeeded in doing something in the matter. He had formed a provisional committee, who had met the directors on June 3, 4, and 5, and on the latter day they came to the conclusion that it would be preferable, in the interests of the shareholders, that a formal committee should be appointed; the directors at once expressed their concurrence, and that was the cause of the present meeting being called. The directors felt that it would be unnecessary to limit the scope of the enquiry, and the matter would, therefore, be left entirely in the hands of the meeting. He would ask Mr. Surgy kindly to explain what the committee proposed.

Mr. Surgy read the resolutions which the provisional committee proposed to submit, and explained that they came to the conclusion that it was desirable for the shareholders formally to appoint a committee, and he regretted that all the gentlemen on the provisional committee could not give their time upon that now to be appointed. The meeting would readily understand that under the circumstances it would be very undesirable to enter into a discussion upon the affairs of the company.

Mr. PERCEVAL SMITH said that all were agreed that a grievous wrong had been done to the shareholders, and that it was incumbent upon them to make enquiry, and endeavour to do something in the matter. He believed that the directors were willing to afford every information, and they had candidly answered every question which the committee had put to them.

A SHAREHOLDER suggested that unlimited power of expenditure should not be given to the committee.

Mr. SURGEY was not aware that there would be any expenses, but thought the power necessary, as shareholders could not expect the committee to give not only their time and trouble for nothing, but also to pay their own money for the purposes of the company. The only chance of expenditure would be for sending out someone to California. The directors would, no doubt, take care that the company's money was not improperly expended; indeed, they had very little at their disposal, and he might say that the intention of the committee was that the expenditure asked for by them would be kept at the lowest possible point.

Mr. BERGTHIEL said the whole proceedings seemed to him to be of an extraordinary character. He had every confidence in the directors, but what he wanted to know was the history of the mine. He thought the making of a report to the shareholders should not be left to the discretion of the committee, but that they should be required to report. He would be satisfied if they undertook to report in three years,

and if they sold the mine at cost price in the meantime he was sure no shareholder would find fault with them. He wished to know whether it was intended to give power to the committee to effect a compromise. He thought it might be desirable to give that power, but it should be distinctly stated.

Mr. UPTON (the company's solicitor) did not think so much responsibility should be thrown upon the directors, as was done by leaving all acts of the committee to the discretion of the directors. The Articles of Association gave the committee to ample power.—Mr. JANSON thought the directors should have more power than the Articles gave them.

Mr. UPTON enquired whether Mr. Janson had read the 10th section of the Articles of Association? The meeting could not override the Articles; they could be modified, but there was a regular mode of altering them.

The resolution as passed was to the effect that a committee be appointed to enquire into the history, affairs, position, and prospects of the company; that such committee report and offer recommendations to directors and to general meeting, if necessary; that the committee be five in number—Messrs. A. F. Cunningham, F. H. Janzon, C. Surgy, E. W. Verner, M.P., and E. P. Wolsterholme; that the committee have power to inspect all books and papers of the company, and that the directors and officers of the company be authorised to afford all information in effect, if the directors think proper in the interest of the company; and that the directors be authorised to pay proper expenses.

Mr. UPTON explained that none of the 20,000 could be expended.

Mr. SURGEY remarked that the objects of the committee would be to ascertain the whole truth of the matter.—The CHAIRMAN declared the proceedings at an end, and expressed the hope that good would result from the course adopted. Thanks were then voted to the Chairman, and the meeting separated.

#### EMMA SILVER MINING COMPANY.

The adjourned extraordinary general meeting was held on Tuesday, at the Cannon-street Hotel.

Commissioner-General GARDNER in the chair.

Mr. TOOKE (secretary) read the notice convening the meeting.

The CHAIRMAN said the only business which was before the adjourned meeting was to take the poll upon two resolutions which were brought forward at the last meeting in opposition to the policy of the board. The first of these resolutions was to the effect that Mr. A. McDougall should be elected a director, and an amendment was proposed to the effect that Mr. Hutton should be elected a director instead of Mr. McDougall. The amendment was put to the meeting, and, on a show of hands, was carried by a large majority. The next resolution was to the effect that the board should augment its present number from five to seven members. Now, at the last general meeting which was held five directors were considered to be sufficient to meet the requirements of the company in its then condition; this condition remained unchanged; and the board were of the opinion that five directors were sufficient. However, the resolution to increase the number of the directors was put to the meeting, and lost by a show of hands by a large majority. A poll was demanded on both questions, and they were assembled on the present occasion to take the poll, and consequently to determine whether the board, as at present constituted, had the confidence and support of the majority of the shareholders. The first poll was taken on the amendment as to whether Mr. Hutton should be a director of the board. The scrutineers were Mr. Wood on the part of Mr. Hutton, and Mr. Geinip on the part of Mr. McDougall, and he had simply to declare the poll was now open. Mr. SNELL asked if the directors had any communication from Mr. Hutton, to say whether he would act as a director if elected?

The CHAIRMAN said he did not think it was necessary to answer a question of that sort.

Mr. McDUGALL: May I be allowed to make any remarks?—The CHAIRMAN: No; the poll is open, and the business of the poll will be proceeded with at once.

Mr. SNELL protested against the form of paper which was printed to facilitate the taking of the votes.

Mr. McDUGALL asked upon what register the poll was being taken?

The CHAIRMAN: Upon the official register.—Mr. McDUGALL: It was not written up at the last meeting.—The CHAIRMAN said it had been written up since.

Mr. WOOD said he objected to Mr. Snell's proxies, and asked whether they had been lodged at the company's office?

The SECRETARY said that a sealed packet, which was stated to contain the proxies, had been lodged at the company's office.

Mr. WOOD said that there was really no evidence whatever that Mr. Snell's proxies had been lodged at the office.

Mr. SNELL said that he objected to Mr. Wood's proxies on the ground that they had not been lodged at the office, and also on the ground that the form of the proxies was wrong.

The CHAIRMAN said that Mr. Snell had made an assertion which was not correct.

Mr. McDUGALL said he did not recognise the right of the board to request the lodgement of the proxies. (Oh, oh! and a laugh.)

The poll on the first question was then proceeded with, and, this having been finished, the poll on the second question was proceeded with.

Mr. BUMPAS said that several of Mr. Snell's proxies were improperly stamped.

Mr. SNELL: I say they are all properly stamped.

The poll was then taken on the second question.

Mr. McDUGALL asked whether he could be allowed to speak on the poll?

The CHAIRMAN: No; we will inform you of the result of the poll as soon as possible. There was no other business to be proceeded with beyond the taking of the poll.

The scrutineers then proceeded with the casting up of the numbers, but after proceeding for some time it was found to be a work of longer time than was anticipated, and the meeting was accordingly adjourned till six o'clock.

At six o'clock the CHAIRMAN announced that the counting up of the numbers had been only half concluded, and the meeting would, therefore, be adjourned till the following Tuesday at the same time and place, when the result of the poll will be announced.—The meeting then broke up.

#### ST. LAWRENCE GOLD MINING COMPANY.

The annual general meeting of shareholders was held at the offices, New Broad-street, on Tuesday.—Capt. SHAW in the chair.

Mr. W. H. ROBINSON (the secretary) read the notice convening the meeting.

The CHAIRMAN said, with the report and balance-sheet in their hands, he thought they would expect from him but a very few words, except upon the important paragraph referring to the anticipated dividend of 1s. per share. No dividend would be paid. Do not, however, construe the circumstance into anything affecting the value of the property, because in reality it was not so. He must call their attention to the fact that, acting under the imperative wishes—his might say orders—of the board of directors here (and this any shareholder could verify from letters to the mine), the resident director, and Mr. Rodda, the superintendent, had been directing all their energies to sinking. Those practically acquainted with American mining know very well that where there is only one shaft, and sinking is continuous, the output is seriously affected in amount. He would show them directly that the shaft had been sunk 80 feet in a very short time (making the entire depth of shaft 800 feet), and as there is but one compartment to spare for hoisting ore—the other being used by the sinking contractors—the amount of ore raised for the month of May had not been sufficient to keep the mill running at its full capacity, consequently the "clean-up" did not leave, after meeting expenses, sufficient to pay the dividend suggested in the report. The directors had thought, as he felt confident the shareholders would think also, that with such a promising property as they possessed sinking is all important, so as to get well ahead, and with ample reserves, of which there can be no doubt they are now in possession of, such a procedure is better calculated to produce steady and regular dividends in the future. He would now read a report prepared for this meeting by the superintendent, in whom they all—he thought he could say without any exception—had full confidence:—

May 25.—At the request of the managing director, Mr. Bateman, I beg leave to submit a report of your property at the annual meeting of the company, at London, England. I regret to say my report will not be prior to August 1, 1874, at which time I took the superintendency. It is not necessary for me to comment on the previous management, as that you are already aware of. I also state that if the mine had been opened out more thoroughly previous to my taking charge, the company would be in receipt of good quarterly dividends. On August 1, 1873, the mine shaft was 500 ft. deep, with all stops between the 400 and 500 almost exhausted. I found it was necessary to sink immediately, and, to accomplish this, to put in a steam pump at the 500, with a cistern to take up all surface water. This work cost until Sept. 16 before we could commence to sink. The shaft for 80 feet showed a well-defined vein, averaging 4 feet thick, and milling ore. At 580 the vein came in with an intrusion in the vein, principally gouge matter. At 600 the vein came in again, very much improved. After cutting station and securing bottom, and the rainy season coming on, I found it would be necessary to new timber the shaft below the 100 for a distance of 25 feet below the 200, this being about December 1; this work taking 15 days, the remainder of the month was spent in opening the drifts from the 600, to get out of the way to sink again. In repairing shaft and opening 800, I regret to say the mill did not crush any ore in December, it being a month devoted to repairs and opening out of the mine. The ledge struck at the 600 proved to be the back of the ledge, and a new and separate chimney, as the slope has proved below. The 600 drifts north run 107 feet and south 120 feet, of those drifts in broken ledge matter, full of quartz boulders, which has proved since by the ore in slopes coming up to within a few feet of the level. On Jan. 1, 1874, I contracted to sink to the 700. On this sinking it was a large and good ledge for the full distance, showing a fine body of ore. In the 700 the drift run north 100 ft., carrying for 80 feet in the drift a large ledge, 54 in. thick; chute of ore continued to pitch north, at an angle of 25° from the shaft, the slope running up to within a few feet of the 600 north. The south drift at 700 is 70 ft.; at about 7 ft. the shaft, and 12 ft. in south drift, a small break occurred. 58 ft. of drift shows a good footwall and large ledge; this ledge is more regular and much longer than it has been since we left the 400 ft. level, with good indications still in the end; at I go up in the shafts I find it somewhat broken. I contracted, on May 1, to sink 75 ft. below the 700; the shaft is down to day 60 ft., with the ore of south chute in the north end of shaft, or crossing the shaft; the south end of north chute is 10 ft. from the shaft.

I find the deeper we sink the larger the pay chutes are getting, while the ground that is the hanging-wall is getting harder. We are also getting down below the breaks in the hills that surround us, and in a short time, as the shaft indicates, the gouge will be much smaller, holding the ledge firmer, and requiring much less



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1. The first part of the paper is devoted to the study of the asymptotic behavior of the solutions of the system (1) as  $t \rightarrow \infty$ . It is shown that the solutions of the system (1) are bounded and tend to zero as  $t \rightarrow \infty$  if the matrix  $A$  is stable. The second part of the paper is devoted to the study of the asymptotic behavior of the solutions of the system (1) as  $t \rightarrow \infty$  if the matrix  $A$  is not stable. It is shown that the solutions of the system (1) are unbounded and tend to infinity as  $t \rightarrow \infty$  if the matrix  $A$  is not stable.

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the mine. The water gave them no trouble of any consequence. He looked forward next year to being in new and he hoped profitable ground, and he had every confidence in anticipating a better future.

The CHAIRMAN said, in reply to a question, that at the time the old workers abandoned the mine they had been selling about 100 tons of lead a month, and in the year previous even more than that. In another two or three months from the present time they might hope to pay their expenses. He could not consider the profitable working of their property anything but a question of time, they had such strong evidence of remunerative results from their former workings. (Hear.)

A cordial vote of thanks, upon the motion of Mr. WATSON, was then accorded to the Chairman and directors, and the proceedings terminated.

#### ECLIPSE GOLD MINING COMPANY.

A general meeting of shareholders and contributories was held at the London Tavern, on Thursday, for the purpose of receiving the final report and accounts of the liquidators, showing the manner in which the winding-up has been conducted, and the property of the company disposed of, and of hearing any explanation that may be given by the liquidators, and also for the purpose of passing any resolutions adopting and confirming such report and accounts, and the final dividend stated therein, and appropriating a balance of assets in hand after payment of such dividend, providing for the disposal of the company's books and papers, and releasing the liquidator and closing the winding-up, or such other additional resolutions as the meeting should deem expedient.

Mr. P. ATRELL in the chair.

Mr. F. R. BLUETT (the late secretary) read the notice convening meeting. The following report was taken as read:—

"LIQUIDATORS' FINAL REPORT.—Since the meeting, held on Jan. 27 last, the decision of the Court has been with reference to the division of the assets. The ruling is, that both classes of shareholders—the old and new—must participate in the surplus capital according to the amount paid up on their shares. The proportion payable upon the old capital (17 per share paid up), and the bonus shares, which under the Vice-Chancellor's order are to be taken as fully paid up, will be 6d. per share, and upon the new capital (16s. per share paid up), 4d. per share; this will abate the sum of 2355. 14s. 4d., and leave a balance of 1337. 15s. 9d. to meet the final law costs and charges of winding up. The arrears of calls still owing amount to 5467. 17s. Every endeavour has been made to recover the amount, but without success. It is not intended to take or prosecute further proceedings, as it is believed the moneys spent in so doing would be thrown away. The liquidators greatly regretted that the winding-up should have been so protracted, but in consequence of actions against contributories who were in arrears of calls they have been unable to bring matters to an earlier termination. A statement, showing the manner in which the winding up has been conducted up to Jan. 14 last, was presented to the shareholders at a meeting held on that date, and approved. This statement will be reproduced at the final meeting, and will, with the accounts and the present report, form an account showing the manner in which the winding-up has been conducted, and the property of the company disposed of."

The CHAIRMAN commenced by observing that he had very little to add to what was contained in the report now before the shareholders, and what had been so fully stated at the last meeting. As to the collection of the arrears of calls, the expenses had been very heavy; but the shareholders must bear in mind that the liquidators had had no property to dispose of or funds in hand, and had merely to depend on the getting in of the calls in arrears. They had taken legal proceedings for their recovery, and in some cases had failed, after being put to heavy expenses, and the liquidation had been thereby delayed. He had to inform the meeting that the legal decision had been that all claims should participate in whatever funds were available, so that on the paid-up and bonus shares the returns would be 5d., and partly-paid shares 4d. per share, and after making those distributions there would remain a balance of 1337. 15s. 9d. to meet the final law costs and charges of winding-up. The liquidators had exercised the strictest economy possible. It was thought probable that arrears of calls might be recovered from one or two more shareholders, but the liquidators had that morning come to the determination to stay all further proceedings, as the money so spent might be only thrown away; and he felt sure the gentlemen present would approve such decision. (Hear, hear.)

He had only further to state that since the report and accounts had been prepared a further sum of 600 had been recovered, making a balance of 1837. 15s. 9d., out of which would have to be paid the legal expenses, office rent, and other charges in connection with the final winding up of the company. The foregoing remarks comprised all the information he had to lay before the meeting, but if any shareholder present desired to ask any questions he should be happy to hear and answer them to the best of his ability.

A SHAREHOLDER desired to know how much the balance of 1837. 15s. 9d. remaining in hand, after payment of the dividend proposed, represented per share?

Mr. F. R. BLUETT replied about one farthing, and as regarded the holdings of some shareholders even that amount would not be divisible. The liquidators had fixed the amount of division as close as possible.

The report and accounts were then adopted, and resolutions were passed by which the proposed distribution was agreed to, the balance in hand, after paying all expenses, voted to the liquidators, and the dissolution of the company agreed to.

The CHAIRMAN desired to express his regret that the result had not been more favourable, still for such as it was they were deeply indebted to their solicitor, Mr. Sykes, for the great services he had rendered the company; and to their valuable secretary (Mr. Bluet), of whom it was impossible to speak too highly. He begged to propose that a sincere vote of thanks be accorded to the solicitor and secretary.

The motion, on being seconded, was put to the meeting, and carried unanimously. Mr. J. W. SYKES (solicitor) expressed his gratification at the manner in which the shareholders had recognised his services. He had done the best he could for them, though in so doing he had not gained the good wishes of others; he had, however, acted in accordance with right and justice.

Mr. F. R. BLUETT (accountant and secretary) felt great pleasure in acknowledging the vote of thanks. He had always endeavoured to do his duty to the shareholders under the old direction, and during the course of the company's liquidation, and they might depend upon it that he would continue to do the same by any company he might be connected with.

On the motion of a SHAREHOLDER, a cordial vote of thanks was passed to the Chairman and his colleagues, which having been briefly acknowledged, the proceedings terminated.

#### BATTLE MOUNTAIN MINING COMPANY.

An extraordinary general meeting of shareholders was held at Liverpool, on Wednesday, for the purpose of considering and passing the following resolutions:—

That the following articles be added to the Articles of Association of the company:—1. The directors may from time to time borrow on behalf of the company any sums of money not exceeding in the aggregate the sum of 5000l., at such rate of interest, and upon such terms and conditions as to repayment, or otherwise, as they shall think fit. 2. The directors may secure the repayment of any money authorised to be borrowed by them by mortgage of the whole or any part of the property of the company, or by the issue on behalf of the company of debentures, promissory notes, bills of exchange, or such other securities as they may deem expedient. 3. Any mortgage may contain a power of sale, and such other powers and conditions as the directors think expedient; and any debenture, promissory note, or other security may be made in such a manner, and may contain such provisions, as the directors think expedient.

Mr. J. HALLIOWS occupied the chair; and there were also present Messrs. Campbell, Paton, Pryor, Browne, Moffatt, Henson, Houghton, Nancarrow, and Worthington.

The CHAIRMAN, in proposing the adoption of the resolutions, explained the circumstances under which the mine was worked. It was not that they were in a position of embarrassment at the present time, for a large quantity of ore had been sold at San Francisco, and it was sufficient to cover the expenses for some time. There were no liabilities of any moment, and the company was in a perfectly solvent condition; but the directors considered it their duty to ask for the 5000l. to enable them to carry out the work properly. If the resolutions were agreed to it would be necessary that they should be confirmed at a subsequent meeting, and they would not be held until the arrival in England of Capt. Richards, the overseer of the mine, who was on his way hither, and would, no doubt, explain the condition of the property satisfactorily to the shareholders.—Mr. HENSON seconded the adoption of the resolutions.

The CHAIRMAN, in answer to Mr. Worthington, stated that it was proposed to raise the amount by the issue of debentures.

Mr. BROWNE thought the third resolution was a most objectionable one, especially the first clause. If the money was to be raised by debentures it was not necessary to ask the shareholders to confer such a power on the directors as was contained in the resolution. He proposed as an amendment that the third resolution be omitted altogether.—Mr. MOFFATT seconded the proposition.

On the amendment being put to the meeting it was declared lost, and the original motion was adopted.

#### WEST MARIA AND FORTESCUE MINING COMPANY.

A four-monthly meeting of shareholders was held on Thursday at the mine, Mr. J. E. WATSON, of Glasgow, the purser, presiding.

The accounts showed:—Dr. Balance from last account, 1389. 14s. 1d.; labour cost, 1242. 12s. 11d.; merchants' bills, 474. 2s. 3d.; dues, 387. 3s. 8d.; discount on sales of ore, 7. 0s. 3d.; discount on calls, paid, 522. 0s. 7d.—Cr. Received on account of calls, 1428. 17s.; copper ores sold, 5987. 5s. 6d.; arsenic sold, 292. 10s.; discount on merchants' bills, 2. 11s. 7d.; balance, 885. 11s. 3d. The report of the agents, Capt. Skewis and Coward, stated that:—

Willesford's shaft is sunk 10 fathoms 1 foot 6 inches below the 93 fathom level, and as soon as it is sufficiently deep for a fork below the 104 we shall at once commence to cut through the lode, by the side of which we have been sinking for the last 7 fms., and it is probable from the indications presented that it will be found a good lode. The part of the lode carried in the 93 west is 6 ft. wide, of a strong masterly appearance, and worth for copper 30s. per fathom. Since the last general meeting the ground laid open has varied in value from 30s. to 50s. per fathom, and from the appearances we have reason for expecting a continuation of the same. The slope in bottom of the 93 west is at present worth 50s. per fathom, and in the back it is worth 25s. per fathom.—Arsenic Department: The kilns are producing arsenic equal to our expectations. During the past four months the yield has been 95 tons, 53 tons realising 4. 5s. per ton, and 45 tons sold, but not yet delivered, realising 5s. 10s. per ton. We find that a good profit is derived from burning out low-class ores, as in addition to extracting the bulk of the arsenic they contain, it will materially increase the net value of the ore. From this it will be seen that the results of this department have considerably increased the returns of the mine.

Mr. COWELL, the largest shareholder in the mine (holding upwards of 1200 shares), said that before the question of call was considered he should wish

to make some enquiries, and in reply to the questions he put, it was elicited that during the past twelve months above 10 fms. had been sunk, and above 35 fathoms driven in the different levels. The total returns on the sale of copper ore and arsenic for the same period had been about 3190s. The gross costs had been 8,500s., but only 6443s. had been actually expended in labour cost, the balance being absorbed by dues and other incidental expenses.

Capt. SKEWIS, the manager, observed that they had a very hard ground mine, which made the explorations expensive. At one time they were threatened to have their property taken away from them; then they had to pay 3000s. for the renewal of their lease, and had also been driven into a lawsuit, in addition to the other difficulties to contend with; but every effort had been made by himself and Capt. Coward, the resident agent, to keep the price as low as possible consistent with the efficient working of the mine, and he believed the view he always entertained, that the mine would become remunerative when it was sunk below the 100, would soon be realised.

The CHAIRMAN proposed a call of 1s. 6d. per share to pay off the debit balance, believing that would be sufficient, as they could reasonably expect larger returns both of copper and arsenic for the next four months.

Mr. COWELL thought that 1s. would have been sufficient, but after the satisfactory explanations which had been given he would second the motion, which, on being put, was carried unanimously.

A vote of thanks to the Chairman terminated the proceedings.

#### SOUTH CONDORROW MINING COMPANY.

The general meeting of adventurers was held yesterday at the offices, Austinfrasers,—Mr. DONALD FRAZER in the chair.

Mr. JAMES HICKEY (the secretary) read the notice convening the meeting, and the minutes of the last meeting, which were confirmed. He then read the statement of accounts for the four months.

The CHAIRMAN said he regretted that neither of his colleagues were able to be present. Mr. Field (the Chairman) had been obliged to leave before the meeting commenced, and Mr. Weston was in Liverpool.

A SHAREHOLDER asked what was the average increase in the price of tin? Capt. VIVIAN said the last parcel sold had realised 67. per ton more than the previous sale. It was now at about the same price as that at which the last parcel was sold. It was still much less than it had been.

A SHAREHOLDER thought it would be much better to sell fortnightly than to store the tin as they were at present doing, as they owed the merchants about 6000l. They would then take the market prices; but tin was low now, whereas in 1872 it was at 85s. per ton, and in 1873 it was 87s. 10s.; and now they were obliged to wait for the rising of the market to sell their stock.

Mr. BARTLETT considered a mistake was made in the first place in stocking tin, but it was out of the question to think of realising the whole stock at present.

A SHAREHOLDER said that shortly after the last meeting he had written to Mr. Hickey, asking the amount they were paying for coal, tallow, candles, and gunpowder, and from the prices which the secretary favoured him with he thought they were paying too much. The coal was 23s. 6d. per ton, which if it was good coal would not be too dear; but he considered that 47s. per cwt. for tallow was too much, for at the present time the best tallow in the market was 38s. per cwt. both in London and in Plymouth. Either a good market had not been gone to, or the merchants were charging too much. The candles were 6s. 6d. per dozen, and he believed as good candles could be bought for 4s. 8d. per dozen, which was a loss of 25 per cent. The same remarks, he believed, also applied to the powder purchased for use in the mine.

In reply to these observations, said the coal used was of the best quality for their purposes. Some of it was obtained from the Mayne Colliery, at Neath. He had imported several cargoes, and he did not trust to local merchants entirely, but occasionally they received these cargoes from Neath. The price now was 20s. per ton, delivered on the mine. They had to pay 6d. per ton for wharfage at Hayle, and 3s. 6d. per ton for bringing it to Camborne and thence by cart to the South Condorow Mine.

Mr. BARTLETT asked what was now being paid for candles?—Capt. VIVIAN replied that he was paying 5s. 6d. per dozen at six months' credit.

Mr. BARTLETT thought that they should participate in whatever funds were available, so that on the paid-up and bonus shares the returns would be 5d., and partly-paid shares 4d. per share, and after making those distributions there would remain a balance of 1337. 15s. 9d. to meet the final law costs and charges of winding-up. The liquidators had exercised the strictest economy possible. It was thought probable that arrears of calls might be recovered from one or two more shareholders, but the liquidators had that morning come to the determination to stay all further proceedings, as the money so spent might be only thrown away; and he felt sure the gentlemen present would approve such decision. (Hear, hear.)

After a few other remarks of a similar character, Capt. VIVIAN read the report, as follows:—

June 25.—We are driving the 93, south of King's shaft, with six men, to intersect the tin lode, and have pleasure in saying that the rock is favourable for driving through, so that at present we are advancing at the rate of about 5 fms. per month, and shall reach the lode in about seven months if no change takes place. This cross-cut will strike the lode in the heart of the best tin ground driven through at the 82 and levels above, and will give a height of stopping ground between the 93 and 82 fms. levels of about 16 fathoms, which has never yet been reached upon. This tin ground is, so far as yet opened through at the 82, 36 fathoms long, and worth on an average in the back of that level about 30s. per fathom. From the 82 to the 93 fms. levels we think it will be found the richest section of tin ground we have yet had in operation. A winze will shortly be commenced below the 82 to communicate with the 93 as soon as the cross-cut may be into the lode. In the 82, west of King's shaft, the lode in the present end is not so valuable as it has been, being now worth about 15s. per fathom, but we have seen these changes in it before, and therefore anticipate that it will again become of equal value to the ground already driven through. The No. 3 winze, which is being sunk under the 71, is now down 10½ fathoms, and has about 6 fathoms more to be sunk to communicate with the 82; this winze has passed through a very good lode hitherto, which has been of an average value of about 25s. per fathom; in the present bottom it is 6 ft. wide, and worth fully 50s. per fathom. In the 71, west of King's shaft, the lode is 3 ft. wide, and worth about 10s. per fathom. We are rising in the back of the 71, east of King's shaft, where we are carrying a winze of 5 ft., which is worth about 16s. per fathom. We are also sinking a winze under the 61, east of King's shaft, to communicate with the rise last alluded to; this winze is now down 11½ fathoms, where the lode is 5 ft. wide, and worth about 16s. per fathom. In the 61, east of King's shaft, the lode is 5 ft. wide, and worth about 10s. per fathom. Fraser's shaft has been sunk to the 30, and the said level driven east about 6 fms., where the lode is 2 ft. wide, and worth about 5s. per fathom, the price for driving being 17. 10s. per fathom. We have had a run of very good tin ground in the 20, and levels above eastward from Fraser's shaft and new shaft for a length of 50 fms. The 30 will soon be getting under this, and we, therefore, look with confidence for an early improvement in this level. We are preparing to sink Fraser's shaft below the 30 to communicate with the 50, which is just under it, and on this being accomplished shall be enabled to do away with the surface roads and pitwork in Fraser's shaft, and to push on the shaft on the 50 under the tin ground just alluded to. We attach considerable importance to this part of the mine (east of Fraser's) as the tin ground appears to be lengthening in going down, and is very cheap to work. With a view to opening out the tin ground as quickly as possible between the 20 and 30 already alluded to, we are sinking new shaft below the 20, it being now down 6 fms., and on reaching the 30 shall drive west to meet the same level coming east from Fraser's shaft. We have raised and dressed 104 tons of tin in the past four months, or 35 tons per month. Of this we sold 104 tons 6 cwt. 3 qrs. 16 lbs., realising 5747. 6s., leaving 128 tons in hand, which may be estimated as worth, according to the present selling price, 55s. per ton, and will make the credit, after deducting 90 tons of tin in stock at the last meeting, 5649. 6s. The four months' costs on the mine, including lords' dues on the tin sold, amounted to 6024. 13s. 7d., leaving a profit on the four months' working of 1624. 12s. 5d. Having reduced our cost to about 1500s. per month, we think the result of the next four months' working will be about the same as the last.—JOSEPH VIVIAN AND SON, WILLIAM WILLIAMS, H. ABRAHAM.

Mr. BARTLETT asked if only sufficient tin was being sold to meet the costs? Capt. VIVIAN said he was only selling a parcel of tin every month sufficient to meet the labour costs and to pay a certain proportion of the merchants' bills. With respect to the sale of more tin than this, he thought the question had better be left in the hands of the committee of management to deal with. When they got rid of their present indebtedness to the merchants he thought it would be better to have the tin sold at three months' credit, and at different rates of consumption.

A SHAREHOLDER asked what was the consumption of coal at the present time? Capt. VIVIAN replied about 200 tons a month, or 800 tons for the four months treated of in the accounts.

The CHAIRMAN then proposed that the accounts, with the agent's report, be received and passed, and that a copy be sent to each adventurer.—Mr. A. J. MARSHALL seconded the proposition, which was carried unanimously.

On the motion of Mr. WATSON, seconded by Mr. MARSHALL, Messrs. Field, Weston, and Fraser were elected the committee of management for the ensuing four months.—The motion was carried.

Mr. BARTLETT said that they had now arrived at the turning point of their existence. They were now making a profit of 400s. a month, the mine was looking very well indeed, and the accounts altogether looked favourable. He thought they would be able to please everybody when the tin came to be sold monthly.

Mr. BARTLETT thought the adventurers were greatly indebted to the Messrs. Vivian for the manner in which the affairs of the company had been conducted by them. He had been on the mine several times, and from personal observation he could affirm that everything was conducted properly.

The meeting terminated with a vote of thanks to the Chairman.

#### SOUTH TOLCARNE MINING COMPANY.

A general meeting was held at the offices of the company, on Thursday, Mr. R. COLLINS in the chair.

The accounts, after charging four months' cost to May 16, showed a debit balance of 754. 17s. A call of 3s. 6d. per share was made (1150s.). The agent's report was read, as follows:—

June 23.—Since the last meeting of shareholders we have drained the mine to the bottom, or 20 fathom level under adit, being a depth of 47 fathoms from the surface, and cleared the shaft of debris, and it was full 16 fathoms up from the bottom. On reaching the bottom we found the 20, which had been extended east and west by the former company on the engine lode, very much filled up with debris. We cleared the eastern level, which was found extended 20 fathoms. The lode in this level varies from 1 to 2½ feet in width, is very soft flooken, and ferruginous, and generally containing tin. We drove the level a short distance, and value the lode in the present end, where it is 2 feet wide, at about 3s. per fathom. The cost of driving would be 2s. per fathom. We are now in course of clearing the 20, west of the engine shaft, and have advanced about 7 fathoms; the lode appears to be of much the same character as in the eastern level. We found the 20 also driven north about 13 fathoms, and as this appeared, from the discoveries made in the deep adit level cross-cut, to be within a fathom or two of Vivian's lode, we resolved to commence operations by intersecting this lode. We have found that this lode at the 20 has been split into numerous fibres by slides, but the whole of them are metalliferous, containing blende, with yellow and black copper ores. On driving through these parts of the lode, which extended to a width of nearly 9 fathoms, we found ourselves within a short distance of Fraser's lode, which dips rapidly towards the engine shaft and Vivian's lode. We are now in course of intersecting Fraser's lode, having passed through it to the extent of 9 feet, and there appears to be more of it yet ahead of the cross-cut. In the last 2½ feet of it, through it has been composed principally of quartz, containing some strong yellow copper ore. This lode and Vivian's lode are dipping rapidly towards each other, and at the 30 will be amalgamated, where, judging from our observations on the results met with at the present level we should expect to meet with a very large and rich lode.

We purpose commencing at once to sink the engine shaft, and should the rock continue as it is in the present bottom of the shaft we shall reach the 40 within five months, and shall then have 16 fms. to drive north to intersect Fraser's and Vivian's lode combined, whilst we shall at the same time be opening east and west on the engine lode, by which we may at any moment be opening east and west. By the rapid dip of Fraser's lode towards the engine shaft at the 40 we shall only sent dip will bring it into the engine shaft, and into junction with the engine lode, but this calculation cannot be relied upon, for one of the most important and promising features of the mine here comes into view as a disturbing element, according to the dip of the great tin lode of South Condorow and West Basset Mines, where seen in this mine at the deep adit level and above, it will reach the engine shaft somewhere between the 40 and 50 fms. levels, having previously come into junction with Hickey's, Innis's, Fraser's, Thomas's, and Vivian's lodes, and there forming a junction with the engine lode. At and about these points of junctions and amalgamations we may safely calculate on large and rich formations of tin, as has been the case under precisely similar circumstances in South Condorow and West Basset Mines. We have driven the deep adit level south on the cross-course, and intersected four branches within a distance of 13 ft., which we believe to be likely to consolidate in that direction; and should they do so will probably become productive of copper.

The gossan lode, which is further north than any of those already referred to, through this lode in the deep adit level, where it consists of some scores of fathoms proportions of black copper ore, grey copper ore, yellow copper ore, and green carbonate of copper. The gossan shaft has been sunk on the last named lode to a depth of about 24 fathoms under the adit by a former company, but no level was driven under the part where we have since opened through such a fine-looking lode. The lodestuff from the bottom of this shaft now lying on the surface consists of fluor-spar, containing occasionally rich patches of yellow and grey copper ores. This shaft might be very quickly drained by light rods and pitwork connected with the present engine. We have now referred to the various parts of the property which we consider are the most important, and which we think stamp the mine as one of the best and most genuine speculations in Cornwall. It is our intention, if it meets with the approval of the shareholders, to commence sinking the engine shaft with as little delay as possible—say within a week, and as we shall be on the course of the engine shaft we may at any moment make a discovery of value. We also purpose driving the 20 west on Fraser's lode, and the same level west on the engine lode. Our cost in the next four months on our proposed scale of working will be about 150s. per month.—J. VIVIAN AND SON, J. PAULL.

#### HERODSFOT MINING COMPANY.

At a meeting of adventurers, held at the mine on June 16 (Mr. M. LOAM in the chair), the accounts showed a profit on the four months' working, from Jan. 11 to May 2, of 117. 11s. 6d., a balance of assets over liabilities of 1685. 13s. 11d., and a cash balance of 957. 4s. 3d. Messrs. Loam, Hawke, and Isaac were re-elected members of the committee. The following report was read to the meeting:—

June 16.—We have made the communication at the 190 referred to in my last report, and are now driving that level south; the lode is 4 feet wide, and worth for lead 15 cwt. per fathom. The lode in the 190 north is 2 ft. wide, and worth for lead 6 cwt. per fathom. There is one stope working in the back of this level, yielding 8 cwt. of lead per fathom. The lode in the 175 south is 1 ft. wide, worth 8 cwt. of lead per fathom. There are four stopes working in the back of this level, yielding 8 cwt. of lead per fathom. We have since the last meeting resumed the driving of the 180 south; the lode in the present end is small, yielding some good stones of lead. There are two stopes working in the back of the 147 and 160, yielding about 7 cwt. of lead per fathom. The foregoing are the principal operations, and I may state that at the 190, which is our bottom level, we have driven over a good piece of ground, and the engine shaft ought to be going down, but thus far we have had no encouragement as to a reduction of dues, and as we now pay 15s. 10d. a dish, with a deep mine, and other current expenses so considerably advanced with a serious falling off in silver, that we consider we are fairly entitled to the consideration of the lords for a liberal reduction of dues, and until they comply to assist with a reduction of dues I feel it a great responsibility under all circumstances to advise further sinking the engine shaft. Our machinery is in good trim, and I am glad to say, notwithstanding the depressed times in mining, we have managed to meet current cost.—THOMAS TREVELLION.

#### WEST TOLGUS MINING COMPANY.

The two-monthly meeting of shareholders was held at the mine on Monday, Mr. TAYLOR presiding. The accounts presented were:—To labour costs for two months, 1524s.; merchants' bills, 1274s.; charged on account of thirteenth month, 120s.; Total, 2918s. Credits: By copper ores sold, 4784s. 2s. 7d.; loss, 174s.; Total, 2918s. It was stated by the Chairman that the balance against the mine did not include any lords' dues, no dues having been paid for a long time. Good improvements had taken place in the 125 and 85, and other improvements were expected in the 15 and 95. The sales of ore for the next account had realised 3934s., and it was expected that 500s. profit would then be shown, after the balance against the mine had been defrayed. The report of the manager and agents, Captains Hancock, Gribble, and Vigus, was considered highly satisfactory, and to give fair promise that West Tolgus would soon again be on the dividend-paying share list:—

The lode in the 55 fms. level west is 8 ft. wide, yielding 12 tons of ore per fathom; dressing by six men, at 7. 7s. per fathom. The rise, which was stated at the last meeting to be 11 fms. behind the end, has been communicated with the 75 fms. level, the lode yielding 8 tons of ore to begin with from the 55 fms. level; where, holed, 5 tons per fathom. The rise men are set to stope west from the rise in the back of the 85 lode, yielding 10 tons of ore per fathom; worth 80s. per fathom. The lode in the 55 east is 3 ft. wide, unproductive; driving by four men, at 6. 10s. per fathom. There is one stope in the back of the 55, east of shaft, by six men, at 4. 10s. per fathom; yielding 3½ tons, worth 20s. per fathom. Since last meeting our prospects have continued to improve, the 85 and 55 having opened up very fine courses of ore for 8 fms. in length in each end, and the improvements in the 75 and 95 west lead us to hope that we may soon meet with courses of ore in them also. Our sales of ore for the next account realised 3934s. 1s. 3d.; this we anticipate will give a profit of 850s., and enable us to pay off the debt against the mine and leave a surplus of about 500s. Our quantities of ore having increased, we have thought it advisable to have monthly sales, and accordingly sampled last week 200 tons of good ore as a first sale for the July and August account.

WEST CHIVERTON.—At the meeting, held yesterday, the loss for the quarter was stated to be 958s. The agents' report stated that there were several improvements since the last meeting, and the returns had been increased. It was resolved that the meeting should be held in London, and that in future alternately in London and on the mine. We shall publish a full report next week.

PROVIDENCE.—At the meeting on Wednesday (Mr. E. Trythall in the chair) the labour and materials up to the latest possible period (May 22) were charged, showing a debit balance of 2632s. The loss on the 15 weeks' working was 2682s. A call of 2s. per share was made. The call was made to discharge every liability. The manager states that they will now pay costs, unless any adverse change in the price of tin (not, however, anticipated) should take place. Several points of the mine have been considerably improved. They expect to sell about 15 tons of tin per month. No further relinquishments have taken place. One gentleman, well informed as to the actual position of the mine, writes:—"No one who has read Capt. Hollow's report would dream of throwing up his shares at the present moment."

NORTH CROFTY.—At the meeting on the mine, on Tuesday (Mr. Wm. Watson in the chair), about 18 shareholders were present, and the Chairman held proxies representing about 600 shares, which of course gave him control of the proceedings. Messrs. T. Pryor, Painter, and J. Vivian, jun., were desirous of keeping the engine at work, so as to sell the mine as a going concern. The Chairman and those he represented desired that the purser should realise the assets, pay off the liabilities, and wind-up the company. To carry out the latter, the Chairman proposed that the resolutions of April 28 and May 12 be rescinded, and that no committee be appointed, and that the purser be authorised to realise the assets, pay all the liabilities, and wind-up the affairs of the company. The bringing forward of these motions gave rise to an uproar which is much to be regretted, but the Chairman declared the resolutions carried and closed the meeting. It was afterwards proposed by Mr. Young, and seconded by Mr. Bartle, that "Mr. Watson's services be dispensed with by this company." Mr. Young putting the resolution to the dissentients, and declared it carried, although he was informed that the meeting had terminated, and that no notice having been given of such a motion the resolution could have no legal weight. During the meeting the list of shareholders was missed, and the Chairman failed to recover it. Mr. Watson immediately agreed to allow Mr. Young's proposal against the resolutions passed to be entered in the cost-book, and this was signed by the dissentients. The shareholders did not fight.

SOUTH GREAT WORK.—At the meeting of shareholders, on Wednesday (Mr. J. L. Goddard in the chair), the accounts for the 10 weeks ending April 25 showed a debit balance of 1000s. 7s. 4d. A call of 5s. per share was made. Capt. Saml. J. Reed reported that the results of the past four months' operations have added much to the value and future of the mine, as our most extended level has been driven, and with the long extent of mineral ground which lies before us, and may be cheaply worked as level after level are being brought to bear upon it, and I look upon the present position of the property as of permanent value, and the prospects of future development as likely to produce, and in all probability, will stamp this mine as one of the most remunerative this district has known for many years past. It may be observed, by referring to the points valued in this report, that the tin ground is not confined merely to one short shoot of mineral; but the long levels of tin ground show that the more vigorous the development is carried on, the more certain is it of producing profitable and permanent results. The sale of tin may now be increased 25 per cent. upon the past four months' returns, and, judging from present prospects, will continue to do so in the same ratio for a considerable time to come. Capt. Richard King, of New Hendra, Breage, has specially inspected the mine, and reports very favourably upon it; there are a great number of lodes, and he believes that South Great Work will shortly be ranked among the dividend-paying mines.

WEST BASSET.—The third-monthly meeting was held at the mine on Friday, Mr. J. C. Daubuz presiding. The accounts showed a credit balance of 236s., and a profit on the three months' working of 142s. To labour costs for three months ending April 24, 5628s.; merchants' bills, 2435s.; parish rates on dues, 119s.; balance to the credit of the company, 236s.; Total, 8418s.—Credits: By sale of tin, 119s.; balance from the last account, 94s.; tin sold, less dues, 34s.; extra carriage 9s. 10d.; tinstone sold, less 1-30th dues, 344s.; copper sold, less 1-30th dues, 547s. 7s. 10d.; Total, 8418s. The credit balance of 236s. was carried over to the next account. It is stated that a good improvement had recently taken place in the back of the 114, which was worth 3s. per fathom, and that a much larger profit would have been made but for the expenses incurred in erecting the new stampe. The report of the agent, Capt. Nicholas, was exceedingly satisfactory.

CATHEDRAL.—The course of copper ore recently discovered continues to look well.



THE FLAGSTAFF MINE.

CLEE HILL COLLIERY COMPANY.

[For remainder of Original Correspondence see this day's Supplement.]

## MINING NOTABILIA.

[EXTRACTS FROM OUR MINING CORRESPONDENCE.]

**TYLLWYD.**—The lode running south-west from middle lode has further improved, and is now worth  $1\frac{1}{2}$  ton of silver lead ore per fathom. Captain Paul considers that every fathom driven on the course of this lode lays open 30 tons for stopping. The other operations at the mine are most encouraging. Any one interested in his property should read Capt. Absalom Francis's book on "Mining in Cardiganshire" where it is very highly spoken of.

### FOREIGN MINES.

to drill for this purpose, and as soon as it comes to hand will lose no time in setting it to work.—The Mine. I regret to inform you that we had scarcely begun and black galena (blende) came in, forming no galena of any value; and a waste open any one ground, although it has gone to what was believed to be our main old stope under a vein of second-class ore, and holing to the bottom of one of the always considered the ore would hold through; but, unfortunately, the ore was only a couple of feet thick, and all the intermediate distance was composed of waste in this place. The failure of this part of the mine, which we have always looked upon as the most productive, is a very serious matter; and what is still more serious, so far as we can see at present, the lode does not go down, being cut off by a shale, to which I referred in my letter of Jan. 19; since then work on this point has been suspended till about three weeks since, and attempts to find the very poor. In a post or two I hope of our finding the continuation in depth is reasonable, so to understand the position of this part of the mine. It looks now as if we had driven into and opened on the very best part of the lode, only a thin layer

end. The 60, east of an Victor's, has got into a small fissure, which appears as if the character of the lode is about to change. The cross-cut south of San Victor's, at the 50, has been communicated with the cross-cut north of San Carlos's shaft. The lode in the 20, west of Addis's cross-cut, is small and poor. The cross-cut east of the 20, at the 50, has been driven in a new course, but has not yet reached sufficiently into it to prove its character. The lode in the 80, east of Crosby's, is very much disarranged. In the 60, west of Crosby's cross-cut, the lode is small and regular, containing a little lead, but not enough to value. The lode in the 50, east of Judd's engine-shaft, is small and compact; worth  $\frac{1}{8}$  ton per fathom. There

**Tuesday.**—**New Shaft.** We have dialed the level east of this shaft, and find we have to drive north about 2 fms. more to intersect the north part of lode seen in open-cast. In the level west of this shaft we have been cutting through the better part of the lode, which, as far as yet seen, is fully 7 ft. wide, and worth 4 tons of ore per fathom. This point looks better, having a promising appearance to open out in depth. The lode will have fully cut through the lode we shafted the men to sink. The lode in the level south east of open-cast is an opening out good. The ground here is a little hard and spare for dressing. The other parts of the mine are without change.

## ECHOES FROM THE MINING MARKET.

Many business houses have transacted in foreign mines. Chontales and Frontino are again attracting attention, and if I mistake not, these old mines will far supersede the many American schemes which last year found so much favour with the public. It is appalling to contemplate the loss amounting to millions of pounds sterling which British investors have suffered through purchasers of Emma, Flagstaff, Last Chance, Tecoma, and the numerous shares which have been puffed up by the various vendors. It has been rightly said that the Cornish and Devon, the richest mines would have been discovered which would have amply repaid for the outlay. However, a warning has now been administered, and it is hoped that less reliance will in future be placed in the extraordinary statements put forward by plausible Americans. Chontales Mine is now making a monthly profit, and these shares present a fair speculation. The statutory meeting of Glaisdale Whinstone Quarry was held on Thursday. It was merely formal, but it afforded the chairman the opportunity of explaining the substance of the above-mentioned resolutions. The company's affairs have been formed. An account will, no doubt, be found in another column. I have so frequently alluded on the merits of this property, that I need only add that a cheaper or more *bona fide* investment could not be desired.

**FUEL ECONOMISER.**—Messrs. E. DAVIES, of Liverpool, and S. DAWSON, of Manchester, have patented an improved feed-water heater and fuel economiser, and apparatus connected therewith for steam-boilers. A feed-water heater and fuel economiser constructed according to this invention may consist of two or more vertical metal pipes of suitable diameter. These vertical pipes are by preference composed of short T pieces screwed or coupled together, and so arranged that they can be connected together by horizontal pipes screwed or connected to the T pieces, or the feed-water heater may be formed of a series of vertical pipes connected at the top and bottom by horizontal pipes, or of vertical and horizontal pipes combined, forming a network, or of a single length of pipe formed in the shape of a flat scroll. The feed-water heater thus constructed may be of considerable width or height, with little depth or thickness. In consequence of this construction it is of form suitable to place immediately behind furnaces and flues of steam-boilers, in which is known as the combustion chamber, without taking up much room in the chamber and being an impediment to the draught. In front of the feed-water heater is placed an adjustable damper, formed by preference of a sliding metal plate, so that the feed-water heater, when required, can be shut off from the action of the flame. Behind the feed-water heater we place terra-cotta, or fire-clay bricks or tiles, which may have glazed surfaces or otherwise, so as to retain or reflect the heat and throw it back on the feed-water heater.

## COPPER ORES.

Sampled June 3, and sold at Swansea, June 23

Mines.	Tons.	Produce.	Price.	Mines.	Tons.	Produce.	Price.
Capé Ore.	63	304½	£ 28 3 0	Berch. Sweep	4	4½	£2 12 0
ditto	62	56	27 14 0	Knockmahon123	4½	2	4 0 0
ditto	61	29½	23 10 0	Telhadale	127	27½	21 0 0
ditto	49	49	23 10 0	ditto	58	10½	7 7 8
ditto	47	36	27 14 0	Copper Ore.	51	7½	5 4 6
ditto	43	58½	27 14 0	Austrian Ore.	18	14½	10 15 6
ditto	7	20½	29 6 0	ditto	18	14½	10 15 6
Berch. Sweep	4	4½	5 9 6	Stanley Cop.	6	6	3 5 0
ditto	129	7½	5 6 6				

## TOTAL PRODUCE.

Cape Ore .....	32	£848	0	6	Copper Ore .....	51	£266	0	6
Berehaven .....	274	1469	6	0	Australian Ore ...	45	448	12	6
Knockmahon .....	250	1194	10	6	Stanley Copper ...		19	10	0
Teihadella .....	60	497	16	0					

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Copper Miners' Company .....	4	£ 10 8 0
P. Grenfell and Sons .....	63	1,773 9 0
Nevill, Druce, and Co. ....	6	19 10 0
Vivian and Sons .....	279	4,565 16 0
Williams, Foster, and Co. ....	691	5,407 3 0
Charles Lambert .....	52	603 10 0
<b>Total .....</b>	<b>1008</b>	<b>£12,350 5 0</b>

1990-91 1991-92 1992-93 1993-94

Copper Ores for sale in July 7.—Cape Ore 88, 67, 65, 66, 65, 63, 63, 63, 31, 10.—  
 Berehaven 120, 67, 101, 101.—Knocknashinn 138, 108, 34, 68.—Copper Precipitate 72,  
 6, 5.—Copper Dust 21.—Copper Ore 43, 8, 7, 1, 1, 8, 14, 7.—Copper Waste 15.—Copper  
 Regulus 11.—Copper Ore 4.—Australian Ore 9.—Total, 1649 tons.

**TOTALS AND AVERAGES.**

	21 cwt.	Produce.	Price.	Per unit.	Standard.
Whole sale...	1008	16½	213 5 7	15s. 6d.	& 97 11 6



## Mining Correspondence.

## BRITISH MINES.

**ABERDAUNANT.**—S. Toy, June 25: In the No. 2 adit, driving east, the men are making fair progress; the ground has changed for the better, and I am pleased to say we have broken some stones of lead from the forebreast this week. The No. 4 stope over this level is worth 15s. per cubic fathom for lead. In the east part of the set we are sinking cross-cut on the back of the quartz lode, and have opened eastward on it about 30 fathoms; the lode is very large, from which we have broken occasional stones of lead in the past week, but not enough to value.

**ASHETON.**—M. H. Whitford, John Craze, June 24: No particular change in Mawr and Browne's shafts since last reported on. The lode in the 40 ft. west is split up in branches, and is consequently poor. The lode in the stope west of No. 2 winze will yield 1 ton of lead per fathom. The two stopes in the back of this level, west of No. 1 winze, will yield in the aggregate 4 tons of lead per fathom. The piece of ground being stowed away south of No. 1 winze will be completed to the bottom of the 40, and east of winze, by the end of this month, after which we shall drive east, where the lode will yield from 1½ to 2 tons of lead per fathom, and should this continue according to our anticipations it will lay open a good piece of productive ground. The winze sinking below the 30, west of Browne's shaft, will yield from 12 to 15 cwt. of lead per fathom. The stope in back of the 30, on the south east branch, will yield 18 cwt. of lead per fathom. The stope in the back of the 8 west will yield from 1½ to 2 tons of lead per fathom.

**BAMPFYLDE.**—Samuel Mitchell, June 22: I am pleased to say that our prospects never looked so well as at the present time for the general character and productiveness of the various lodes; these are all that we can desire. We are busily engaged forwarding the ore by traction engine, &c. We have already 20 tons of copper ore at the railway station; 80 tons are on the floors at the mine, this we are daily removing, and within three or four days we shall have a parcel of copper ore of 100 tons in transit for the market.

**BEDFORD CONSOLS.**—George Rowe, Joseph Mitchell, June 24: The lode in the 65, east of sump-winze, is 4 ft. wide, producing very strong munda, with spar and capels, intermixed with good stones of yellow copper ore, and showing indications of improvement.

**BEDFORD UNITED.**—William Phillips, June 25: There is very little change to notice. Operations generally are continued by the side of the lode, and we postpone taking down the lodes until next week, when respective values will be given.

**BOG.**—W. T. Harris, J. Barkell, June 25: The lode in the 175 driving east produces nice stones of lead. The end of the lode is improving for ore as driven forward, and from appearance we cannot but be far from a bunch of ore. The 163 east has much improved, now worth 1 ton lead per fathom, and very promising. In the 163 west we have been enabled to reach the forebreast, where we find the lode in the end to be worth about 12s. per fathom for lead and blende. There is no other change worthy of remark since our report for the general meeting.

**BOWDEN HILL.**—J. Goldsworthy, June 24: The ground in the adit level is without change to notice since you were last advised. In the joints of the stratum we find occasional flakes of manganese. Good progress is being made.

**BRYNABOR.**—G. Spargo, June 24: Since we resumed the driving of the 12 west, to get underneath the run of ore gone down in the bottom of the adit, we have broken some good stones of lead ore; the run of the soft part of the lode is impregnated with lead and spots of sulphur of copper ore. The general character of the lode has improved during the past week, and we are saving all the north part of the lode, some of which we are now hauling to surface for dressing. The rain set in yesterday, and all our machinery is working at full speed; the water has risen to within 1 ft. of the bottom of the 12. Fair progress is being made in preparing hutchies, sieves, &c., all of which are in a forward state of completion. During the drought we have repaired the cut road throughout the whole length of the property, also cleansed our main water-course; both are now in excellent order.

**BURROW AND BURN.**—John Christopher, J. Mayne, St. Agnes, June 25: Fortnightly report. At the 62 ft. level going west we cut the lode last week. It is now 3 ft. wide, with a distinct footwall and in ground of light colour; very kindly for the production of copper. The lode is composed of capel and quartz, mixed with munda, blende, and copper, but not enough to value. The 40 west continues to yield about 2 tons of blende, strongly mixed with copper. We have commenced clearing the 40 ft. level, going east, and are making good progress, being in already over 7 fms. The stope in the back of the 30, west of Tonkins's shaft, is worth fully 2 tons of blende per fathom, with occasional stones of lead. The cross-cut at the 30 ft. level, east of Tonkins, is not yet into the north lode. The lode in the end of the 30 ft. level going west has improved to about 1 ton of blende per fathom. The 30 cross-cut, also improved, yielding now 1 ton of blende per fathom, with good stones of lead. The new machinery will be on the mines this day, and we are using every means to get into the new house as soon as possible.

**CRENVER AND WHEAL ABRAHAM UNITED.**—Wm. Thomas, J. Hammill, Saml. Arthur, June 24: Setting Report: On Saturday last the following bargains were taken:—Sturt's Engine Shaft: To drive the 228, west of shaft, by eight men, the month, at 21s. per fathom; the lode is 2 ft. wide, principally composed of spar. To drive the 200 east, by two men and two boys, the month, at 15s. per fathom; the lode is 2 ft. wide, yielding stones of good copper ore, and letting out more water, which we sink a good shaft, to drive the 215, west of shaft, by eight men, the month, at 15s. per fathom; the lode is 2½ ft. wide, yielding 2 tons of copper ore per fathom. To stope in the back of this level, and west of rise, by six men, at 3s. per fathom; the lode is at the present time 1½ ft. wide, yielding 2 tons of copper ore per fathom.—Crenver Shaft: To drive the 140 fathom level, west of Harvey's rise, and east of the shaft, by three men and three boys, at 9s. per fathom; the lode is 1 ft. wide, composed of munda, peach, and spar.—St. George's Shaft: To sink this shaft below the 203, by nine men, the month, at 19s. per fathom; the lode is 2 ft. wide, yielding copper ore to dress, but we think that we shall have an improvement here shortly. To drive the 203 east of the south lode, and west of the shaft, by six men, the month, at 8s. per fathom; the lode is 1 ft. wide, producing 1 ton of copper ore per fathom. To sink a winze below the 190, east of the cross-cut, on the south lode, by six men, the month, at 10s. per fathom; the lode is 1 ft. wide, composed principally of spar. We seek in driving this level to prove the ground, and also to ventilate the 203 fathom level.

**Woolf's Shaft:** To sink this shaft below the 208 fathom level, by nine men, the month, at 25s. per fathom; the lode is 3 ft. wide, yielding 2 tons of copper ore per fathom. The 208 ft. level to drive west, by three men and three boys, at 12s. per fathom, the lode being 3 ft. wide, yielding copper ore to dress. To stope in the back of the 208 ft. level, east of shaft, by four men, the month, at 3s. 10s. per fms.; the lode is 4 ft. wide, producing 2½ tons of copper ore per fathom.—Vivian's Shaft: To drive the 230 ft. level east of shaft, by six men, the month, at 11s. per fathom; the lode is 1½ ft. wide, yielding munda and peach.—Pelly's Engine Shaft: To drive the 248 ft. level west, by six men, the month, at 16s. per fathom; the lode is 2 ft. wide, principally consisting of spar, with a little copper ore, having a better appearance. The 234 ft. level to drive west of shaft, by eight men, the month, at 9s. per fathom; the lode is 1½ ft. wide, yielding a little tin. To sink a winze below the 234 ft. level, by nine men, the month, at 15s. per fathom; the lode is 5 ft. wide, producing a little copper ore. We have set a stope in the bottom of this level, east of the winze, on tribute, to four men, at 6s. 10s. To drive the 234 ft. level east of shaft, by six men, the month, at 12s. per fathom; the lode is 1 ft. wide, yielding munda and peach.—Blewitt's Shaft: To sink this shaft below the 220 ft. level, by six men, to hole, at 15s. per fathom; the lode is 2 ft. wide, yielding a little tin. To drive the 220 west, by six men, the month, at 5s. per fathom; the lode is 3 ft. wide—a very kindly-looking lode. To drive the 210 ft. level west, by six men, the month, at 7s. per fathom; the lode is 5 ft. wide, producing a little copper ore.

**Richards's Shaft:** To drive the 200, west of shaft, by six men, the month, at 7s. per fathom. The lode is 2 ft. wide, composed of spar, &c. To rise in the back of the 180 west, by six men, the month or ore, at 6s. 10s. per fathom. The lode is 1 ft. wide, yielding munda, peach, and a little tin. To sink a winze in the bottom of the 170, west of shaft, by six men, the month or ore, at 5s. per fms. The lode is 1½ ft. wide, producing stamping work. We hope to obtain a communication here by next week, which will enable us to resume the driving of the 170 west. To rise in the back of the 170, west of shaft, by four men, the month, at 4s. 10s. per fathom. The lode is 2 ft. wide, and of little value. To drive the 140 west, by six men, the month, at 6s. per fathom. The lode is 1½ ft. wide, yielding peach and a little tin, having a kindly appearance.—Gard's Shaft: To drive a cross-cut south, by two men and two boys, at 8s. per fathom. We are of opinion that there is still more of the lode standing to the south. We have suspended the 110 cross-cut, north of Pelly's shaft, and put the men to drive the 130 cross-cut, south of Woolf's shaft, four men, the month at 10s. per fathom. There are 20 men on this week on tubwork 173 men and boys; on tribute, 74 ditto; at surface, 60 ditto; total, 307.

**CWM BYCHAN.**—Thomas Owen, June 24: The lode in the cabin level appears about the same for some time past. The No. 2 east and west lode, in the drive eastward, appears very promising for the production of lead ore, and I expect to cut into something valuable ere long.

**CWM DWYFOR.**—J. Jewell, June 25: The lode in the level driving east of the south cross-cut has improved since last reported on, and is now 2 ft. wide, containing copper ore of good quality, munda, and a little tin. To sink a winze in the north cross-cut part of the lode that is being carried is 4½ ft. wide, a well-defined lode, producing some splendid copper ore, occasional stones of lead and sulphur. We are now driving this level on the north part of the lode. We do not know how large the lode is at this point, but purpose after we have driven a few feet further if the south wall does not make its appearance to cut into it to ascertain its size and value.

**DEERPARK.**—J. Goldsworthy, J. Bucknell, June 20: The sinking of the engine-shaft is progressing satisfactorily, considering the nature of the ground, which is mixed with veins of capel, quartz, and munda; it is strongly mineralised. The machinery is in good order and works well. We have not as yet received the balance-book connection from the foundry.

**DENBIGHSHIRE CONSOLIDATED.**—J. Pryor, June 25: In the 112, driving east, the rib of spar that was on the footwall has kept with the advancement of the level, and I am very pleased to be able to report that we have intersected a very good rib of ore, which, from all appearances, is likely to lead us to a very valuable discovery. You will recollect that we stated, as our opinion, that immediately the level was under the hill our expectations at this point were likely to be realised. I am, therefore, pleased at the result, as one of the objects for which the company was started may be said to have been achieved. In the rise in the back of the level the men are turning out paying stuff. The 112 west looks better to-day for driving, but until Parry's lode is reached we do not expect much. Junction shaft is down 38 yards; this and every other operation is progressing satisfactorily.

**DUNSEY WHEAL PHOENIX.**—W. Skeewis, W. Richards, June 19: The pit-work in which-shaft is now complete. The engine was put to put to work on Sunday last. The new work answers well, in fact, it is quite a success. This week the men have been employed repairing shaft, fixing collars and ladders, dividing and casing shaft in the underlie, &c. Next Monday we think the shaftmen will resume sinking deep adit level, driving west of cross-cut, on the course of the lode. The lode is much the same as usual, composed of branches, carrying with them the usual indications for tin—peach, iron, spar, and capels. The lode looks so kindly as to lead me to think any day I shall not be surprised to see tin here.

**DYLIFFE.**—Edward Evans, Edward Rogers, June 19: Dyliffe Lode: The 120 is driving north of boundary shaft, by six men, at 7s. 15s. per fathom; we intend to push forward this cross-cut to the lode as far as circumstances will admit. In the back of the 105, east of the cross-cut, there is one stope set to ten men, at 4s. per fathom; the lode is worth 24s. per fathom. In the 40 we are driving east of boundary shaft, by six men, at 6s. per fathom; the lode is 1 ft. wide, unproductive. The winze in bottom of the 25 is communicated to this level, which has en-

abled us to set a stope to six men, at 3s. per fathom, the lode being worth 18s. per fathom. The 25, east of old engine-shaft, is driving by six men, at 6s. 15s. per fms.; the lode is small and unproductive. In the back of this level No. 1 stope is working by six men, at 3s. per fathom; the lode is worth 18s. per fathom. No. 2 is stopeing by six men, at 2s. 15s. per fathom; the lode is worth 10s. per fathom. The 15 is the lode is 1 ft. wide, unproductive, and is driving by six men, at 5s. 15s. per fathom.—Esgairaled Lode: In the 40 cross-cut we are passing through a hard lode, producing a little lead ore, set to six men to drive another 6 ft., at 12s. per fms. The cross-cut is driving by six men, at 9s. 10s. per fathom. We expect to cut the lode in about a week or ten days.—Llechwell du Lode: In the stope in the back of the 35 the lode is worth 10s. per fathom, and is stopeing by six men, at 3s. 10s. per fathom. In the 25 there is one stope working by eight men, at 3s. per fathom; the lode is worth 13s. per fathom.

**EAST BALLYSHIDDEN.**—Thomas Trahair, June 24: The stope in the back of the 30 fathom level, east of engine-shaft, on the flat lode, is still large saving work for tin. The lode in the back of the 30, west of Morgan's engine-shaft, is not so large, but producing good stones of tin. There is no change in the lode in the 30 fathom level end.

**EAST BLACK CRAIG.**—T. Cogar, J. Betty, June 25: In the 108 ft. level the stope west of winze still looks well; worth 2 tons of lead per fathom. The stope in back of No. 1 cross-cut is equal to last report; worth 2 tons of lead per fathom, and 1 ton of blende. We have suspended operations in the stope west of shaft, not being able to draw away the stuff. The shaftmen have been unable to proceed with their bargain for the same reason. Both these companies are engaged as follows: The men from stope are started to sink a winze at the 95, west of shaft, to communicate with and ventilate the stope below; the 108 ft. level is helping the same as at the 108 ft. level, and the end east of shaft has improved since last reported on, and is now worth 25 cwt. of lead per fms. The winze east of shaft is in kindly ground, with spots of lead, but not to value. The winze west of shaft is worth 10 cwt. of lead per fathom. The old stopes are without change since last reported on. The Dalmatic cross-cut, north of the 22, is still hard and without change since last reported on. Craig Mine also without change. The engine-men are busily engaged getting the old engine in order, putting in new well work, and making other necessary alterations. The masons have completed the wheel-case, and are now engaged building crusher-house. We are not able to proceed with our washing operations for want of water; the weather continues dry, with little signs of change.

**EAST CHRYSTON.**—R. Southley, June 24: Last Saturday we set the following bargains:—A rise in the back of the 24 to lode to the level above, by six men, at 35s. per fathom; the end to drive west at the same level, on the course of the lode, for the month, at 50s. per fathom; also a cross-cut to drive north of the engine-shaft, by a full force, and as much as they can drive, for the month, at 20s. per fathom. The 52, to drive east of the engine-shaft, on the course of the lode, as much as they can drive, for the month, at 35s. per fathom. A stope in the back of the 52, for the month, at 17s. 6d. per fathom. After we have communicated the 64 with the level above we shall commence driving two ends in the bottom level on the lead alluded to in my former reports, where I expect good results. The men are making capital progress, the rise, and I fully expect to stop the same as at the time specified. The lode in the 52 is full 4 ft. wide, presenting a beautiful appearance; in fact, I am daily expecting an improvement for lead ore.

**EAST WHEAL BASSET.**—R. Pryor and Son, E. Adams, June 24: Friday last being our pay and setting day, we set our usual number of tubwork and tribute bargains. Our tribute department continues to look well, and there is no change in any of our underground points calling for further comment. The machinery is working satisfactorily, and the pay and setting passed off well.

**EAST WHEAL GRENVILLE.**—E. Hosking, W. Bennetts, June 25: There is no change since our last.

**EAST WHEAL GRENVILLE.**—E. Hosking, W. Bennetts, June 30: Setting Report: To drive the 130, west of engine-shaft, by six men, at 6s. 10s. per fathom; the lode is 2 ft. wide, and producing stamping work for tin. To drive the 120 cross-cut, north of engine lode, by two men and one boy, at 19s. per fathom; the ground is favourable, and letting out more water. To drive the 110, west of engine-shaft, by two men, at 3s. 10s. per fathom; the lode is 2 ft. wide, and worth 7s. per fathom. To drive the 110, east of engine-shaft, by four men, at 3s. per fathom; the lode is looking more favourable, and the ground has considerably eased. To drive the 95, east of cross-cut, by two men, at 4s. per fathom; the lode is 2 feet wide, and worth 8s. per fathom. To stope above the 95, east of cross-cut, by four men, at 2s. 10s. per fathom; the lode is worth 12s. per fathom. To stope below the 95, east of cross-cut, by four men, at 2s. 10s. per fathom; the lode is worth 8s. per fathom. We have also set four pitches, to nine men, at an average tribute of 11s. 8d. in 17; the tributors to be paid at the rate of 50s. per ton for black tin.

**FURZE HILL.**—W. Doidge, June 25: No. 1, North Lode: We have cleared the ancient shaft in the eastern part of the set down to the 54, which has well ventilated this part of the mine. We are now clearing eastward, and hope shortly to make a good discovery.—Middle Lode: We have just commenced driving the 54 west from the rise that leads to the 40, but as yet no lode has been taken down. The stope in the back of this level are worth 8s. per fathom. There is no change in the 40 west. The different stopes in the back of this level are worth on an average 8s. per fathom, but the next parcel of tin will be ready for market by the middle of next week, which will be about 4 tons.

**GORSIEDD AND CELYN LEVEL.**—Wm. Edwards, June 25: In the driving to cut the Merilyn vein the ground is easier for progress. At the driving upon the Gorsiedd lode the vein, which was split into branches, is becoming united, and it is expected that it will produce lead ore. The Quarry lode continues much the same, and I estimate its production for the month at 10 tons.

**GREAT LANEY.**—J. Cornish, June 24: Deep Mine: In consequence of the long continued drought the 235, driving north from the engine-shaft, is suspended from the water being in, not having enough to work the large water-wheel fast enough to keep it under. The sinking of the Welsh shaft is suspended for the present, some very old and decayed timber in the back of the 180 having suddenly given way, thus letting down some deads in the 200, and obstructing the working of the horizontal rods through the latter level from the engine-shaft; no time shall be lost in repairing this to resume the sinking of the said shaft. The lode in the 220 north is worth about 11s. per fathom for lead and blende, and the ground favourable for progress; we expect this end will further improve as it advances. In the 220 ft. level end, which we are driving north from No. 2 winze or sump, the lode at present is rather pinched up, being only about 2 ft. wide, and worth 10s. per fathom, but this we believe to be only temporary. In the 220, driving south from No. 1 winze, against the latter, the lode is worth 20s. per fathom. The 210, driving north, is worth 15s. per fathom. A stope in the back of this level is worth 44s. per fathom. In the 200, driving north, the lode is disordered by a slide, and unproductive at present. A stope in the back of this level is worth about 40s. per fathom. The 190, driving north, is worth about 6s. per fathom for blende, with a fair prospect of improvement. No. 1 stope, in the bottom of this level, is worth 44s. per fathom; and No. 2, 54s. per fathom. In the 180 north we are driving by the side of the lode for greater dispatch, the lode being unproductive where left. The 165, driving north, is worth 22s. per fathom. A stope in the bottom of the level is worth 28s. per fathom. No. 1 stope, in the back of this level, is worth 60s. per fathom; and No. 2 stope, 22s. per fathom. In the 145, driving north, we have a very nice-looking lode, and worth for lead and blende 35s. per fathom. We have no other change in this part of the mine to notice.

**Dumbell's:** The shaft is being sunk below the 185 as fast as possible, and it is down about 8½ fathoms; the ground maintains its favourable character, being crossed by a part of the lode, producing a little lead and blende ores. The ore part of the lode which is being carried in the 185 driving south has become much smaller, being now about 15 in. wide, and worth 5s. per fathom for lead and blende. Whether we have a productive part still standing on the footwall or west side will be proved at some future period by cross-cutting in that direction. The lode in the 185 driving north is worth 50s. per fathom, and looks at present to continue equally productive. No. 1 stope in the back of this level is worth 20s. per fathom, and No. 2 stope in the back of same level is also worth 20s. per fathom. The lode in the 170 driving south is worth 11s. per fathom, and the 170 driving north 22s. per fms. Two stopes in the bottom of this level are worth 30s. and 33s. per fms. respectively. The lode in the 155 driving south is not quite so good, now worth 30s. per fathom. The lode in the 155 north is not so good as it has been, but it is now worth about 90s. to 100s. per fathom. No. 1 stope in the bottom of the 140 is worth 25s. per fms., and No. 2 23s. per fathom. I am very pleased to state that the lode in the 110 driving north is looking better, and we are now trying to discover it nearer the end, presents a very favourable appearance to continue. Our portable engine at this part of the mine is working very satisfactorily, having now to perform the principal part of the drawing, as the supply of water for the turbine is but very little indeed. We have also put the steam-engine to draw from the deep mine (at Welsh shaft), being also very short of water here for the turbine, and we find it to answer considerably better since the addition of more steam capacity in connection with the other improvements and repairs, thus effecting a saving of both coal and time.

**Glen Level:** In driving south from this adit a short distance we found from the appearance of the ground that the lode does not cross at the point we thought it possibly might have done, and we are now trying to discover it nearer the end, where we have a small vein of quartz having a bearing and underlie similar to the Laney lode. We shall be able to speak more definitely on this in our next report.—Agneash: We have no change either in the appearance of the ground or the character of the lode in driving the 25 north; the end is letting out water.—Baldon: We have not yet intersected the lode in the small adit, and a sufficient distance appears to have been attained; if nothing more is seen in a very short time we shall have proved the vein or deposit is not continuous.—Glenfoss: Having found nothing more promising in our trial pit, or shaft, we have put the men to open on the lode further up the mountain side, where it has again been found, but, as yet, not sufficiently laid open to form an opinion of it. We are seriously suffering from want of water on our washing-floors, but after so long a drought we have now had a shower, and we hope soon to get more to assist us. The two new buddles referred to in my last have been completed and put to work. We have also put up two new plunger jiggling machines, which commenced working yesterday, and with an increase of water we shall progress more rapidly.

**GREAT RETALLACK.**—John Harris, June 20: In the 40 east the lode is producing a little more blende than when last reported, with a promising appearance. **GREAT WEST VAN.**—J. Roach, June 25: The bottom levels have been inundated since last week, but we had heavy rain on Tuesday and Wednesday, which has enabled us to set the lift to work to drain them again, and which we hope to accomplish in a day or two, and resume the drainage of levels, stopes, &c. All the bargains above the 40, as well as Eliza's engine-shaft, have been in full operation. There is no alteration at the various points since described last week; the whole maintain their usual quantities of lead ore. The drawing and dressing of lead ore has again been resorted to.

**GREAT WHEAL LOVELL.**—Joseph Prisk, June 25: The ground in the 44 ft. level, east of Hitchen's shaft, is rather hard, and the lode small; driving by six men, at 10s. per fathom. The lode in the 34, east of sump-winze, is improved, being 3 ft. wide, and worth 12s. per fathom; driving by six men, at 8s. per fathom. In the 34, west of the said winze, the lode is 18 in. wide, worth 8s. per fathom; driving by four men, at 7s. per fathom. Nos. 1 and 2 stopes of the sump-winze are looking very well. The lode in the 24, east of Hitchen's shaft, is looking very much better, being 2 ft. wide, and worth 6s. per fathom; driving by four men, at 2s. 15s. per fms. On the whole, the mine is looking well, and a continuance of our present prospects will shortly reward the shareholders for their perseverance and spirited outlay.

**GREEN HURTH.**—W. Vipond, June 20: The end south from incline, on No. 1 cross vein, is yielding ½ ton of ore per fathom; it is going at present just under the limestone, and at the most unproductive random in the mine; we are now up to where we intend to use to the level above, and I shall do this as soon as we get the arch built in behind. The stone ore south of the level is looking very well present, and likely to continue. We are driving from bottom of incline to cut both old vein east and No. 2 cross vein south; I expect we shall be into both these in a week or so, when we shall be getting ore from both, instead of driving two ends both dead work. In driving from bottom of sump, on No. 2 cross vein, to make room for the water, we have a rib of solid ore 8 in. wide in the Hazels; this is down 4 fms. below adit level. The two stopes over adit level, one going south and one

north, are both yielding well at present, and splendid ore ahead going south. No change to notice in Rutter's, or Low level. The continued dry weather has reduced our water. All the dressing is getting behind, do the best we can. **GUNSLAKE (Colliers).**—W. Skeewis, J. C. Seacombe, June 23: The engine-shaft is down below the 164 about 7 fms., and making good progress with sinking. The lode in the 164 east is worth 9s. per fathom. In this level west the lode is looking more promising, now worth 6s. per fathom. The lode in the stope in the back of the 164 is worth as follows:—No. 1, 12s. per fms.; No. 2, 10s. per fms.; No. 3, 15s. per fms.; No. 4, 10s. per fms. The lode in the stope in the back of this level is communicated with the winze sinking in bottom of the stopeing ground. The lode in the stope in the back of the 152 is worth 16s. per fathom. The lode in the 140 west is improved, and now worth 12s. per fathom. The rise in the back of this level is worth 12s. per fathom. The lode in the 110 is improving, and looking very promising, worth 7s. per fathom.

**GWESTY CONSOLS.**—Wm. Peatly, June 24: The lode in the deep adit west, on the north lode, is from 5 to 6 ft. wide, composed of clay-slate, lime-spar, and prlan, with small branches of lead diffused throughout it. We have driven in the past week 1 fm. 5 ft. 6 in. **HINGTON DOWN CONSOLS.**—J. Richards, June 25: Bailey's Shaft: In the 150 fathom level west the lode, which is 4 ft. wide, is composed of munda, capel, of the lode is being carried; it is composed of quartz, capel, munda, and a little black oxide of copper. In the three stopes in the back of the 140 fms. level, and a little lode is still worth 30s., 25s., and 20s. per fathom. In Cocking's winze sinking is now by the side of the lode, and fair progress is being made below the 140 ft. level west. The 139 ft. level west the lode is from 2 to 3 ft. wide, composed chiefly of capel and quartz, with a small proportion of copper ore. The lode in Fitz's winze, sinking below the 120 ft. level west, is still worth 25s. per fathom. The lode in Fitz's winze, sinking below the 120 ft. level west, is still worth 25s. per fathom. In the 110 ft. level west the lode is large and promising (4½ ft. wide), composed of munda, capel, quartz, peach, and a little copper and tin ores. In the stope in the back of the 110 ft. level west the lode is still worth 15s. per fathom.

**HOLYWELL.**—Wm. Wasley, June 25: Plantation Shaft: We are progressing well with driving the 65 yard level cross-cut; the ground is without any change since last reported on. We are getting on a little faster with clearing the 53 yard level towards the Rector's Hobby shaft; the lode in the bottom of Rector's Hobby is about 3 ft. wide, of clay and spar with fine lumps of ore, the same as it has been for some time. The men in the quarry workings are not getting quite so much ore as they were, but it may improve again shortly.

**ILLOGAN.**—R. Pryor, June 24: The engineers are making good progress in the putting in of the engine, and we have cleared all the stuff in the deep adit level. **LADY CONSTANCE.**—W. Wasley, June 25: We continue to make a little progress in driving the 56 yard level cross-cut at Katin's shaft, and from the appearance of the ground, and the distance we are now out from the shaft, I think we are not far from the lode. The shaft is quite dry to the bottom, and the ventilation is now very good. We are getting on well with the drivings at the old shaft, and are continuing driving the level. There is a soft, fine looking ore lode in this end, and we can drive it for 21s. per fathom the ore ground will be opened specially. The drawing-engine continues to work well. We have ordered a new engine and crusher of the Sandycroft Foundry Company. We shall commence building the houses next week.

**MELINDUR VALLEY.**—John Kitto, June 23: The stope in the adit level still continue to look well, and are yielding a good quantity of ore, and there is no prospect of a falling off. We have already a large heap of stuff at surface containing several tons of rich lead ore ready for dressing, and we are getting the dressing machinery put in repair as fast as we possibly can. We have resumed the driving of the 12 west of engine-shaft, but have not done sufficient yet to show much of the character of the lode; I shall, however, be able to say more of this in my next. We have also resumed the driving of the adit level towards the Cwm Erfin lode, and shall push it on as rapidly as we can, as I consider this an important trial, and should it result favourably the success of the mine will be at once established. I have nothing else new to mention.

**NANT-Y-RICKET.**—Thomas Grenfell, June 22: Setting Report for the Month ending July 18: No. 1 stope, in back of No. 1 lode, by four men, the month, at 90s. per fathom; the lode is worth 1 ton of copper ore per fathom. No. 2 stope, in back of No. 1 lode, by two men, the month, at 90s. per fathom; the lode is worth for the length of stope 1½ ton of copper ore per fathom. No. 3 stope, in back of No. 1 lode, by two men, the month, at 90s. per fathom; the lode is worth 1 ton of copper ore per fathom. The quality of the ore being generally known, I need not say it is of the usual high percentage. We are in a fair way of dressing, and hope to send off another truck of ore in the course of the coming fortnight. **NEW GREAT CONSOLS.**—R. Pryor, T. Jenkin, H. Vial, June 23: The lode in Phillips' engine shaft is of much the same character and value as for some time past, and we are pushing on with the sinking of the shaft as fast as possible. The lode in the 30, east of Thomas's shaft, has decidedly improved, and is opening up well. All our other stopes throughout the mine are producing their usual quantities of copper, tin, and arsenic. The men at Broadgate are making good progress in cutting the ground for fixing angle-bob. All surface operations are going on satisfactorily.

**NEW HENDRA.**—R. King, June 25: The lode and the ground continue just the same as when last reported—a succession of cross branches every 2 or 3 ft., each of these branches being a little mineralised. I believe them to be strings spring from a larger lode ahead. **NEW ROSEWARNE.**—E. Hosking, W. Bennetts, June 22: The lode in the 104, west of Bickford's shaft, is 5 ft. wide, and worth 8s. per fathom. The lode in the 55, west of Pool's shaft, looks kinder than for some time past, and is producing a little more copper ore. The lode in the 46, west of Pool's shaft, is 6 ft. wide, and worth 8s. per fathom. The tribute pitches are looking rather better than last reported.

**NEW SOUTH MERLYN.**—R. Rowlands, June 25: We have no change to notice since my last report, but the 120 is looking highly favourable. **NEW WEST ROSEWARNE.**—J. Curtis, June 22: Leeds flat-rod shaft to sink below the 10 ft. level, by nine men, at 24s. per fathom; the copper part of the lode is not looking so well as last reported. I think the north wall of the south lode is in the shaft, with large stones of sulphur munda. The lode in the 10 ft. level is not looking so well for copper, but there is more tin in it, and letting out a quantity of water.

**NORTH HENDRE.**—J. Lean, June 24: The lode in the north level does not yield quite so much ore as when last reported, a great thickness of the lead-bearing sandstone having come in, and a small wedge made its appearance in the bottom of the end, which induces me to think an improvement will soon take place. The measures continue to dip to the north, which plainly shows there is a lode ahead. The stope in the bottom of this level yields about 3 tons of ore per fathom. The bed of ore in the No. 2 west level has taken a sudden rise of about 6 feet. I am pleased to say it looks exceedingly well, and will turn out at least 2½ tons per fms. In the No. 1 east level no change calling for remark has taken place. The lode in the No. 2 east level continues to be of a very promising character, and is opened with lead ore throughout. This end is carried about 7 ft. higher, and the same in width. I hope to be able to report a great improvement in this end at an early date.—Bromley Shaft: The lode in the adit end is at present small, and very much squeezed up, consequently the yield of ore is not so much. The footwall carries its regular course, and, no doubt, the lode will soon open up to its former productiveness. The parcel of ore sold on the 11th inst. was discharged last week. Surface operations going on as usual.

**NORTH LANEY.**—R. Rowe, June 18: I was underground yesterday. Owing to the dry weather the water is still in the 121 and 110. In driving north we have not yet any special change, but just now there are some signs of it, and for the better; the ground is easier, and the lode, which has been split and disordered, is now more collected and compact. The 60, driving north, is worth ½ ton of lead per fathom. In the same level, south of the north shaft, we have a



first, in treating the shrapnel or "chillers" cuppages first in hydrochloric acid or 20° Baumé till the bath gets exhausted, then gradually adding to the latter nitric acid of 46° Baumé in conjunction with a concentrated solution of chlorate of potash, or the same in powder, not exceeding a certain percentage hereinafter specified;



second, in treating tinners' clippings with hydrochloric acid until about two-thirds of the tin upon the surface is dissolved therefrom, then introducing the same in a bath of hydrochloric acid, nitric acid, and chloride of potash, until the remainder of the tin is dissolved. The said invention also consists in apparatus for carrying out the above described processes into operation.

## The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, JUNE 26, 1874.

COPPER.				IRON.			
	per ton	£	s. d.		per ton	£	s. d.
Best selected... p. ton	86	0	0	Bars Welsh, in London	10	0	—
Tough cake and tile.	84	0	0	Do., to arrive	9	15	0
Bleaching & sheets...	93	0	0	Nail rods	11	0	—
Bolts	96	0	0	Staff, in London...	11	5	0
Bottoms	93	0	0	Bars, ditto	11	10	0
Old	80	0	0	Hoops, ditto	12	10	0
Australian	88	0	0	Bars, ditto at works	10	10	0
Wire	0	1	0	Hoops, ditto	11	10	0
Tubes	0	1	0	Fig No. 1, in Wales	10	15	0
BRASS.				STEEL.			
	per lb.	£	s. d.		per ton	£	s. d.
Sheets	104	11	0	Refined metal, ditto	7	0	0
Wire	104	11	0	Bars, common, ditto	9	0	0
Tubes	114	12	0	Do., merchant, f.o.b.	9	0	—
Yellow metal sheathing	84	5	4	in Type or Tees...	0	0	—
Sheets	84			Do., railway, in Wales	7	15	0
SPELTER.				IRON.			
	per ton	£	s. d.		per ton	£	s. d.
Foreign on the spot.	22	0	0	Do., Swed. in London	10	0	—
To arrive	22	0	0	Do., to arrive	10	0	17
ZINC.				STEEL.			
	per ton	£	s. d.		per ton	£	s. d.
In sheets	28	0	—	Fig No. 1, in Clyde	14	15	0
Quicksilver (p. bot.)	19	15	0	Do., f.o.b. Type or Tees	4	0	0
TIN.				IRON.			
	per ton	£	s. d.		per ton	£	s. d.
English blocks	101	0	0	Do., Nos. 3, 4, f.o.b., do.	0	—	—
Do., bars (in grs.)	102	0	0	Railway chairs	5	0	0
Do., refined	104	0	0	spikes	12	10	0
Banca	103	0	0	Indian Charcoal Pigs,	10	0	12
Straits	101	0	0	in London, p. ton	10	0	12
Australian	98	0	0	STEEL.			
TIN-PLATES.					per ton	£	s. d.
	per box	£	s. d.		per ton	£	s. d.
IC Charcoal, 1st qua.*	1	16	0	Swed., in kegs (rolled)	20	10	0
IX Do., 1st quality	2	0	0	Ditto (hammered)	21	7	0
IX Do., 2d quality	1	15	0	Ditto, in faggots	21	7	0
IX Do., 3d quality	2	1	0	English, spring	23	0	25
IX Coke	1	9	0	LEAD.			
IX Ditto	1	15	0		per ton	£	s. d.
Canada plates, p. ton.	19	0	—	English Pig, com.	21	0	21
Ditto, at works	18	0	—	Ditto, L.B.	21	5	0
* At the works, 1s. to 1s. 6d. per ton less.				Ditto, W.B.	21	5	0
Terne-plates 2s. per box below tin-plates of similar brand.				Ditto, sheet	22	10	0
				Ditto, red lead	23	0	0
				Ditto, white	30	0	32
				Ditto, patent shot	25	0	25
				Spanish	20	10	20
				↑ Add 6s. for each X.			

\* At the works, 1s. to 1s. 6d. per ton less. † Add 6s. for each X.  
Terme-plates 2s. per box below tin-plates of similar brand.

**REMARKS.**—Notwithstanding the favourable nature of many of the attendant circumstances which surround the metal trade at the moment—for instance, the cheapness of money, with a yet cheaper tendency—the prospects of the coming harvest, and the long period of dullness through which trade has passed, the markets are dreary and monotonous to the last degree, and the amount of business transacted is contracted within the narrowest limits. The reductions which have already taken place in the values of metals do not seem sufficient to afford any inducement to buyers to come forward and inspire the market with new life, and the time for the commencement of a period of permanent improvement appears to be again indefinitely deferred. There is no doubt but that the real cause of this condition of affairs is that to which unceasing reference has been made in these columns—the state of the labour question. It is true that in isolated districts the quarrel has been temporarily patched up, but there is no assurance yet afforded that a permanent basis has been arrived at upon which the same evening arrangements as will give confidence to manufacturers that they will find purchasers at a price to leave a profit, and to buyers that consumers will not be wanting to enable them to turn over their holdings to advantage.

**COPPER.**—This market was rather on the decline at the close of last week, and the tendency was somewhat accelerated when on Thursday last the charters were announced from Chili for the last half of May, and were found to consist of 2700 tons—1800 tons ores and regulus, and 900 tons of bars. The corresponding charters of previous years were as follows:—1873, 1900 tons; 1872, 3400 tons; 1871, 896 tons; and 1870, 3648 tons. The price of ore is about 15s. 6d. per unit. Chili bars are quoted 79s. cash for g.o.b., and Burra copper 87s.; tough copper, 85s.; best select, 87s.; and 4 by 4 India sheets, 93s. There is very little doing in manufactured descriptions, and yellow metal is likewise dull of sale.

**IRON.**—The re-ensuing event with which the week opened was a report of the termination of the Cleveland strike after a continuance of six weeks. The event, brought about by a resolution of the Miners' Council, at a meeting held at Saltburn-by-the-Sea, on Saturday last, is hailed as the commencement of better days. The men have accepted the terms offered by their employers, and that they have done so is mainly due to the efforts of Messrs. Birt and Casey, of South Yorkshire, and Mr. Brown, of Hanley, who being members of the National Miners' Association strongly urged upon the meeting of the men assembled on the occasion the advisability of closing with the masters' terms. The feeling expressed at the meeting was distinctly in favour of maintaining their own ground, but the gentlemen who addressed the meeting impressed upon their hearers the actual condition of the trade, which necessitated the required reduction, and the men were wise enough to shape their course accordingly. After the preliminary meeting, to which reference has been made, had been held, the gentlemen who had taken an active part therein made a tour through the mining district in the neighbourhood, and by dint of earnest argument and sound advice induced the men to fall into the views they set before them, and a considerable majority at a meeting of delegates, held on the 18th inst., voted for the acceptance of a reduction of 2d. per ton, or about 12½ per cent. upon the rate of wages. These were the terms required by the masters six weeks ago, and upon which the men thought well to strike. Since then the masters have made known their intention upon insisting upon a further reduction of 1d. per ton should the men not return to their work within a stipulated period, which has since elapsed, but the delegates were of opinion that this fine would not be levied; and at a meeting, the same evening, of masters the 1d. reduction was renounced, but a stipulation was made, which was most distasteful to the men, and which it was thought would not be accepted by them, but to which they have yielded their unwilling assent, to the effect that should any claim arise in reference to wages, either from the side of the masters or the men, before the end of the year it should be referred to arbitration, power being granted to both parties to adduce whatever evidence they might think proper. To any unprejudiced mind this proposition would seem to bear upon the face of it the stamp of fair dealing, but the only basis upon which the men are prepared to approve of the principle of arbitration is that of taking the selling price of ironstone sent to the open market. This really forms but a small item in the calculation. By far the larger portion of the ironstone wrought in the district is smelted by the proprietors themselves, or if not it is disposed of by contracts, extending over prolonged periods, and for large quantities, so that only a very insignificant portion of the whole produce finds its way into the open market. For these reasons the employers objected to the terms of arbitration suggested by the men, and pressed upon them the necessity of embracing a wider field, with the view of arriving at a more correct conclusion.

Arbitration has been resorted to with great success in the malleable iron trade in the North of England, and at this moment the Durham miners are most anxious to induce their employers to consent to the very mode which the Cleveland men have been indisposed to accept. It is said that the attitude occupied by the Cleveland men is to be attributed to a mistake into which they had fallen with reference to the result of an arbitration question which was disposed of in the ironstone trade rather more than a year ago. The employers then refused the demand of the men for an advance of 12½ per cent. upon their wages. Mr. Kettle was appointed arbitrator, and he found that the position of the Cleveland miners was in no wise worse than that of the Durham pitmen—the average earnings of each being about 7s. per diem. Between the time referred to and the present the price of iron has fallen to nearly half its former value; but though this is so, and the decline in value has been going on for a very considerable time, no proposition for a reduction in wages has been made until about two months ago, when there can be no doubt the amount proposed was not out of proportion with the requirements of the case; but the men refused to acknowledge the necessity of any reduction until their own pressing necessity, combined with the arguments used by their best and truest friends, constrained them to adopt a wiser and a happier policy—that of submission. It is reported that about 10,000 men have been thrown out of employment in consequence of the strike. This force suffices to raise the ironstone in the district, which is computed to yield annually about 6,000,000 tons of ore or 2,000,000 tons of pigs—the production of the whole country being estimated at about 6,000,000 tons. Had the strike continued until the supplies of ironstone and pig-iron in the district had become exhausted, it is believed that a quarter of a million of men would have been thrown out of employment. Happily, such a catastrophe has been averted. The supplies of the raw material have sufficed to keep the finished ironworks in partial employment; and owing to the dullness of the demand, brought about in great measure by the uncertainty with which contracts could be executed in the district, so that work which would naturally have been placed there had to be given out elsewhere, there has been no pressure upon the finished-iron works, and supplies of pig iron have proved sufficient. The money loss resulting directly from the strike is deemed to be not less than 60,000,000 in wages alone; but this fails to cover the loss entailed upon capitalists by money lying idle and by the non-sale of the raw material. It is true that the evil might have been more extended and the consequences more serious; but they are quite serious enough, and it will be long ere the district recovers from the results of the six weeks' strike.

The Middlesbrough market has been in a state of expectancy, awaiting the result of the Cleveland differences, and so soon as it was known that the men had gone in prices became easier, and pigs have been offered as low as 72s. 6d. for No. 3. The general trade is at such a low ebb that the purchasing power is at the moment limited. America is not in the market to any extent, and Russia has not come forward as usual, while other centres of consumption are still keeping aloof, but for all this the time may not be very far distant when a return to some measure of vitality may be looked for. The possibilities of improvement which are beginning to take tangible form in the North of England are to be discerned in the reports received from South Wales. The total quantity of iron cleared from that district during last month amounted to 46,684 tons, which was in excess of the clearances of former months. Orders are looked for, and although they are long in coming it is hoped that when the trade throughout the country shall present an appearance of being settled these orders will be given out, and the second half of the year prove more productive than that which is just closing upon us. The Scotch pig-iron market,

which closed last week at 97½, opened on Monday last at a lower figure, and business upon ordinary terms was done at 95½, but towards the close the market improved to 97s. On Tuesday higher prices were obtained, transactions taking place up to 98s. 6d., usual terms, and 100s. and 102s. 6d., cash next day. On Wednesday the market was quiet, and the few transactions which occurred were at irregular prices. Yesterday's business was limited. Business was done at 98s. to 100s., cash to-day. The market this day has been variable, 98s. having been paid for cash to-day, and 87s. for cash on Monday.

Week ending June 21, 1873	Tons	12,387
Week ending June 20, 1874	Tons	5,475
Decrease		6,912
Total decrease since Dec. 25, 1873		128,074
Total increase of imports since the same period		30,586
Total stock now in store at the end of last month to the extent of		37,800

Being in excess of the stock at the end of last month to the extent of 12,600 tons.

**LEAD.**—The market is quiet, but firm. Good soft English pig is obtainable at about 21½; L.B., 21½; 5s.; and Spanish lead, without silver, 20½, 15s.

**ZINC.**—150 tons London rolled sold at 25½, 17s. 6d.

**QUICKSILVER** is unaltered in price, but very firm.

**TIN.**—During the early part of the week the market was very quiet, and there was but a slight variation in quotations; but on Wednesday last the market bid fair to resume its former activity. A considerable business was transacted in Australian varieties more particularly, and somewhat higher prices were realised for Straits tin, which sold from 100½ to 101½, cash, and Australian 97½ to 99½. Later on in the week the market became less active, and now there is very little doing.

**TIN-PLATES** show no improvement.

**Messrs. James and Shakespeare.**—**COPPER:** Small quantities of Chili ore and regulus have been sold by private contract, the former at 15s. and 15s. 6d., the latter at 15s. 9d. per unit. At the Swansea Ticketing, on the 23rd inst., 1008 tons of ore, averaging 16½ per cent. produce, realised an average value of 15s. 0½d. per unit. The non-arrival of the telegram with advice of Chili charters, and which was due on Saturday last, prevented much activity in bars; nevertheless, we have to note a tolerably large amount of sales, though without much fluctuation in prices, the figures paid up to Thursday morning being 79s. to 80s. 10s., according to brand, and prompt. On that day the news came reporting the quantity as 2700 tons pure for the last half of May (900 in bars and ingots, 1800 in ores and regulus), and all for England. The quantity for the corresponding period last year was 900 tons, and 3500 tons for 1873. Charters for the first five months amount in round numbers to 21,200 tons, and deducting the stock (about 2000 tons) held back on Jan. 1, which is known to have been shipped to Europe, leaves (say) 19,000 as the make of the country for the period, or an average of 3800 tons per month. Since the arrival of the charters, which are given by Reuter as only 2400 tons, there have been orders in the market for good ordinary brands of bars at 79s. cash, which price holders refused to accept, demanding 10s. per ton more, and apparently not being free sellers even thereat. The enquiry for Australian sorts is slack, but quotations remain unaltered. English continues in fair demand, and smelters are asking full prices. Tin: Rates for English are somewhat nominal, and without an order in hand it is difficult to fix a precise quotation. Foreign sorts are rather firmer, and a good business has been done in Australian, from 98s. to 99s. per cwt., chiefly at intermediate values.

**Messrs. Henry Rogers, Sons, and Co.**—**COPPER:** In consequence of the delay in the receipt of the usual fortnightly cablegram from the West Coast, business during the week has been considerably restricted. Bars have, however, changed hands at prices ranging from 79s. to 81½, according to brand and prompt. Home consumers complain of extreme slackness of trade, and consequently are not disposed to augment their stocks; there is, however, still a good demand for fine copper, the supply of which, excepting in the shape of Australian, would seem to be very limited; ingots also find buyers at fair price. The feeling is pretty general that, notwithstanding the great reduction in stocks during the past and present month, the position of the trade as regards the demand for all articles in which copper is consumed is not such as will tend to increase its value above present prices. [As we go to press the charters for the second half of May are advised as 2700 tons; market closes easier.]

**Messrs. Vivian, Younger, and Bond.**—**COPPER:** At the Swansea Ticketing, on Tuesday last, 1008 tons British and foreign ores, average produce 15.5-16ths per cent., sold at an average price of 15s. 0½d. per unit, Cape ores of 33½ per cent. realising 15s. 7½d. per unit; 140 tons Chilean regulus sold at 15s. 9d., and 35 tons of low produce at 15s. 3d., and 500 tons good produce at 15s. 6d. per unit, all on private terms. Yesterday morning advice to June 2 at Valparaiso came to hand by cablegram, announcing charters for the second half of May equal to 2700 tons fine, in the proportion of 900 tons bars and ingots to 1800 tons ores and regulus. This news having been looked for since the beginning of the week, buyers had mostly been waiting, with the exception of those whose needs were pressing, and the amount of actual business to report is rather limited. In Chili bars for good ordinary brands sales at 79s. 5s. to 79s. 10s., and 79s. 15s. to 80s. picked brands, also 79s. 15s. to 80s. 10s. with extra prompt. In Australian a limited business at 89s. 10s. to 90s. for Wallaroo, and 87s. to 88s. for Burra, also various brands of ingot at 85s. to 86s. The market closes quiet, with sellers of bars at 79s. to 79s. 10s. A fair business in English at quotations—Tin: The market continued dull and drooping for several days, with a few sales of Straits down to 100s., and Australian down to 98s. Prices have since rallied about 2s. per cwt., with fair sales up to 99s. for Australian, and 102s. Straits, closing firm at quotations. English has sold down to 100s. for common ingot; 101s. to 102s. is now obtainable, but demand is only moderate.

**Messrs. Pixley and Abell.**—**GOLD:** The arrivals during the week comprise about 122,000 from New York, 30,000 from the Brazil, and 5000 from Africa. There are no enquiries for export, and about 95,000 has been sent into the Bank since our last circular of the 18th inst., to be followed by further amounts. Some small withdrawals of French gold have been taken place to the value of 50,000. The market for the Continent has been quiet, and prices have advanced, and transactions have been entered into at 58½d. per ounce for arrival, and 59d. per ounce for immediate delivery. The amounts to hand during the week have been 49,000 from New York and about 60,000 from the West Coast of South America.

**THE MINING SHARE MARKET** opened very dull and depressed this week, and continued so until Thursday, when a demand sprang up for tin mines, and the market generally improved.

The mines dealt in were chiefly Carn Brea, Dolcoath, Tincroft, Cook's Kitchen, Wheal Grenville, Parys Mountain, Chontales, West Basset, Old Bottle Hill, Prince of Wales, Providence Mines, Wheal Kitty (Lelant), Van Consols, South Condurow, and a few others.

Carn Brea declined early in the week to 62½, but leave off 67½ to 70; Dolcoaths have improved to 45, 50; Tincroft to 32, 33; Cook's Kitchen to 10, 10½; East Lovell, 12 to 13; Roman Gravels, 15½ to 16½; Devon Great Consols, 20s. to 25s.; Great Laxey, 11½ to 12; Parys Mountain, 9s. to 11s.; Old Treburtig, 16s. to 18s.; Ladywell, 2½ to 3, and mine improving; Van Consols, 4 to 4½; West Basset, 10 to 10½; at the meeting the accounts showed a profit on the three months' working of 142½, and a credit balance of 23½. The costs were charged to the end of April, and including merchants' bills, amounted to 8418½; credits—tinstone sold, 3442½; copper, 547½; 78 tons of tin, 4297½. The lode in the back of the 114 has improved to 35s. per fathom. Wheal Grenville, 4½ to 5½; the lode in the rise in the back of the 140 is still worth 40s. per fathom. West Tolgus, 59 to 61; at the meeting, on Monday, the accounts showed a loss on two months' working of 174½, and a debit balance, after crediting calls, of 342½. The copper ore sold (478 tons) realised 2743½, and the costs were charged to May. The lode in the 85 is reported worth 12 to 13 tons of ore per fathom. The bottom level—the 125—10 tons per fathom. The sale for the next account realised 3934½, which it is expected will leave a profit of 850½, clear off the debt on the book, and leave a credit of 500½. Old Bottle Hill, 13 to 2.

Rosewall Hill and Ransom United, 5s. to 7s.; at the meeting held in Cornwall the accounts for four months, charging costs to April 24, showed a balance against the company of 1086½, 16s. 2d., and a call of 2s. 6d. per share was made. The tin sold down to June 17 was 40 tons 18 cwt., for 2209½, 15s. 10d., and which showed a loss on the four months of 532½, 5s. 6d. The lord has remitted the dues during pleasure, and the agents, having lessened the costs, believe that if the different points of operation in the mine continue their present productiveness they will about meet the future costs of the mine at the present price of tin. Providence Mines, 5s. to 5½, call paid; at the meeting a call of 2s. per share was made. The accounts showed a balance against the mine of 2632½. The agents hope in future to return 15 tons of tin per month, which it is thought will meet the costs of the mine with the present price of tin. The mine is said to be looking better at one or two points. Cargoll, 1½ to 1½; East Van, 1½ to 1½; Hingston Down, 20s. to 25s.; Penstruthal, 8 to 8½; Prince of Wales, 10s. to 12s. 6d.

Pennerley, 25s. to 30s.; the loss on 12 months working is 1443½. At the present, however, the mine, it was stated to the meeting, is working at a profit. Bog, 17s. 6d. to 22s. 6d.; the shaft is now down 12 fms. below the old workings, and in a few fathoms more driving the agents hope to get under the rich ore ground worked away above. The financial difficulties, it is stated, have been all satisfactorily arranged by borrowing 6000½ upon mortgage, and arrangements made for taking up all the unissued shares. Rookhope Valley, 17s. 6d. to 20s. South Carn Brea, 3½ to 3½; South Condurow, 3½ to 4; South Frances, 1½ to 1½; Trumpet Consols, 1½ to 2; Van, 25 to 27½. West Chiverton, 1½ to 1½; at the meeting, to be held in Cornwall to-day, it is expected that a call will be made. West Maria and Fortescue, 9s. to 11s. West Tankerville, 1½ to 1½; Wheal Pevor, 2½ to 3; Wheal Uny, 2½ to 2½. Tankervilles have

been flat at 8½ to 9; the agent's report states that Watson's shaft, carbonate of lime and lead, and has much improved for lead during the last day or two, leading him to hope that when driving is commenced at the 152 something very good will be met with. West Esgrair Lile, 2½ to 2½.

Among foreign mines Chontales shares have advanced to 17s. 6d., 20s.; Cedar Creek, 2 to 2½; Birdseye Creek, 3½ to 3½; Eberhardt and Aurora, 3 to 3½; Emma, 2 to 2½; Flagstaff, 3½ to 3½; Last Chance, 1½ to 1½; Malpaso, 12s. to 14s.; Rica Gold, 3 to 3½; South Aurora, 10s. to 15s.; Sweetland Creek, 4½ to 4½; Tecoma, 17s. 6d. to 22s. 6d.; Thornhill Reef, 8 to 8½.

The market for Mine Shares on the Stock Exchange during the week has again been fairly steady, and the general hardening tendency apparent points to increased firmness.

Home Mines have maintained quotations, any appreciable decline bringing in influential buyers; the opinion in well-informed quarters seems to be gaining ground that the protracted depression in metals is at length gradually yielding to a healthier tone.

American Mines continue greatly depressed, and a general decline has again taken place. At one period Flagstaff shares were quoted as low as 2½ to 2½; Last Chance, 1½ to 1½; and Tecoma, 3 to 3½, but upon purchases to close speculative sales for the fall a partial reaction set in. The shares were pressed for sale upon an apparently well-authenticated rumour that the negotiations had been abruptly terminated with the vendor, who had consequently sent in his claim upon the three companies. The favourable feature of the week in this department has been the renewed demand for Richmond shares at advanced prices, upon the satisfactory advice referred to below.

Hydraulic Mine Shares still command attention, and a good business is doing. Sweetland Creek are firmer; the annual meeting, on Thursday, is reported in another column. Within three months of the company's registration the first dividend was declared; the company has been in existence four years and a quarter, and in that time, upon a capital of 60,000½, has returned 42,000½, besides which there has been expended a considerable sum upon improvements outside the regular working. Blue Tent and Birdseye Creek remain without alteration. Cedar Creek are a shade easier.

The Metal Market has been steady and values maintained. Copper has been fairly brisk. Tin has recovered from the dullness observable in the early part of the week, and closes firm at quotations, and tin-plates are in better demand. Lead much firmer. Spelter unchanged, and but little doing.

Emma shares continue to be nominally quoted at 2½ to 2½; at the meeting on Tuesday, reported elsewhere, which had been adjourned for the purpose of taking the poll upon the election of a director, the Chairman declared that the point in dispute really resolved itself into the question whether the board as at present constituted had the confidence and support of the majority of the shareholders. A further adjournment to Monday was finally arranged, when the result of the poll will be announced. The result, however, may be inferred from the fact that Mr. McDougall, the hostile candidate, has given notice that he disputes the legality of the poll, and for reasons, he urges, that are for the interests of the shareholders. He points out the gross impropriety of the directors in closing the transfer-books before the ordinary general meeting, and opening them again before the adjourned meeting, as this course may obviously be used for purposes prejudicial to a candidate opposing the directors; indeed, under such a rule it is quite impossible to have a fair poll taken. He then quotes circumstances which he alleges are quite sufficient to justify him in taking every step in his power to have the whole facts connected with the transfer of certain shares during the period of the adjournment of the meeting examined into by a court of law. Utah, 1½ to 1½; in another column will be found two letters from Mr. Longmaid. The dressing was apparently doing very well, but the mine, where he has again commenced operations, does not open out so well as was anticipated; possibly this may change before the date of his next letters.

Richmond Consolidated, 6½ to 7. Cable received: "Week's run, three furnaces, 854,000." Although the third furnace can only have contributed about five days' work, the return is \$9000 higher than the average of last year from three furnaces up to the end of August. It is probable that the average profit will be also higher, as the third furnace at the early part of last season was a hired one, which gave very unsatisfactory returns. Between March and December, 1873, the mine produced bullion of the gross value of about 370,000, yielding a net profit of considerably over 100,000. Large as this profit was in proportion to the capital of the company it can scarcely be considered as satisfactory in relation to the gross returns, and in this direction there is a great opening for improvement by more scientific appliances and methods of treatment. The marked improvement indicated by the higher averages this season proves that the point indicated has been attended to. The completion of the connection between the ore body and the McGee shaft will afford leisure and spare hands to re-commence the work of exploration. That the whole neighbourhood is fertile in mineral wealth is proved by the discoveries continually being made in adjoining properties. A large portion of the Richmond ground remains to be explored, and Mr. Clarence King's opinion as to the existence of an under bed of ore has yet to be tested. The Eureka papers report that the Panake Coal Company are about to take active measures to develop the property; if they succeed in producing coke in any quantity it will greatly reduce the cost of smelting at Eureka, as the Panake works are only 18 miles from that place. New Pacific, 8 to 8½; the lode westward has improved, and is now producing some ore. The operations here are being extended in anticipation of meeting with the rich host of ore worked in the upper levels.

Blue Tent, 5 to 5½; the superintendent (Colonel Tozer) has made a test run of five days on the South Yuba claim, and has obtained \$2000. This is good, and looks well for the proceeds when regular washing is commenced. A letter will be found in another column. Cedar Creek, 2½ to 2½; work here is progressing much as usual. Advice from an independent source speak exceedingly well of the present position and future prospects of the undertaking. Birdseye Creek, 3½ to 3½; the tunnel into the new purchase State claim was in 190 ft. at date of last advice, and was progressing rapidly. Work on the other claims going on much as usual.

Sierra Buttes, 2½ to 2½; Independence, 2½ to 3. London and California, 1½ to 1½; at an extraordinary general meeting, on Thursday, reported elsewhere, a committee was appointed to enquire into the history, affairs, position, and prospects of the company, with power to inspect all books and papers in connection therewith. Holcombe Valley, 3 to 3½; Mr. J. Haley telegraphs, under date June 23—"Lower level exceedingly rich." This would seem to prove the correctness of the statement made by the Chairman at the meeting last week—that it required only the new mill to put the company at once into a paying condition, and justifies the appeal then made to the shareholders to provide funds for that purpose by taking up the unissued shares. A communication in another column speaks of these mines, and also of other developments in the district.

St. John del Rey (stock), 247 to 252½; the report of the annual meeting appears in another column. Up to the date of last advice, 10,935 tons of ore had been quarried, and raised through the new shaft; this has yielded better results than expected from the part of the lode worked or; the February, March, and April produce gave an average, within a small fraction, of 1 oz. of gold Troy per ton of mineral stamped. Most strenuous efforts have been made by the mine staff to enlarge the excavations, and get them into a favourable state for more extensive operations as fast as possible, but as the work has consisted chiefly of driving and sinking in a rock excessively hard to quarry, the progress has been necessarily rather slow; and men employed in driving and sinking cannot break more than one-half the quantity of rock they can when regular stops have been formed. The only explosive used is dynamite, which the miners find the most effective, and are now very partial to. The latest letters advise that 157 kibbles were daily drawn to surface through both shafts, which, if maintained, would give 100 tons of ore daily for the stamps throughout the month. Preparations are also being made for putting the guides and cages into the B shaft, which is to be the permanent hauling-shaft, so as to increase the hauling power, and make it more safe and secure. As the opening out pro-



erston-buildings, London, E.C.; or from the Author, post free, for *ss. 175*, June 15th, 1874.



### Notices to Correspondents.

\*. Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

**EXTRACTING SILVER AND COPPER FROM POOR ORES.**—Your correspondent "Rex," in his letter published in the Supplement to the Journal of June 13, states that at a mine in Wales are containing only 8 per cent. of lead, with 12 oz. of silver and ½ per cent. of copper, is economically treated by grinding, calcining, chloridising, and precipitation. Will "Rex" kindly state where the process can be seen in operation?—D. P. S.

**ECLIPSE.**—"J. W." (San Francisco).—The letter and enclosure have been received, and enquiry shall be made as to the particulars named. See a notice among our Foreign Mining Intelligence.

**HOLMBUSH AND KELLY BRAY.**—Can any reader give me some information about these mines, in which I still hold, or suppose I hold, many shares? The fact is from the time I bought the shares some years ago up to now I have never heard anything from the secretary or directors regarding the condition, prospects, or even existence of the mines. I have reason to believe the mines have been wound-up, but if so neither the official liquidator nor the secretary have ever taken the slightest notice of my claims—no more, indeed, than if they never existed. Can anyone tell me if the mines have been sold, or if the company have possession of them still? I should also be glad to know the name and address of the secretary if there is one. If the mine has been wound-up do I forfeit my claims thereby to any share in them as part proprietor, supposing they have not been sold?—A SHAREHOLDER.

**WEST TANKERVILLE.**—"One who Bought at a Premium" should write to the Secretary, who will explain, and give the information desired.

**CLEE HILL COLLIERIES.**—We have withheld the publication of two letters on the understanding that some official information will be forwarded next week.

**Received.**—"A. B. S."—"T. B."—"C. S. R." (Colorado).—"Amicus."—"J. R. H." (Tunbridge).—"M. R." (Neath).—"Shareholder" (Dyliffe).—"Euclid." We could not publish such an elaborate statement; it should be forwarded to the directors, whom it might interest—"F. S. A." should apply to his solicitor—"G. A."—"N. R." Next week.

**SCALE FOR ADVERTISEMENTS.**—Our charge for general advertisements is—for six lines and under, 4s.; per line afterwards, 8d. Average, 12 words per line.

**SHARE DEALING.**—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

**AMERICAN SUBSCRIBERS.**—In reply to several enquiries, it may be stated that subscribers in the United States can be supplied with the *Mining Journal*, post free, at the price of \$5 50c. gold per annum, payable in advance, by remitting to Mr. D. Van Nostrand, publisher, and importer of scientific books, &c., Murray-street, New York; or, direct to our Office, 26, Fleet-street, E.C.

## THE MINING JOURNAL,

### Railway and Commercial Gazette.

LONDON, JUNE 27, 1874.

#### EXTINGUISHING FIRES IN COLLIERIES.

A serious fire which took place at the Kilburn Colliery, near Ripley, Derbyshire, early on Sunday morning, and was not put out up to Thursday, forcibly illustrates the necessity of mineowners having the best known appliances at hand for extinguishing fires, in which not only the lives of the workmen but much valuable property are involved. In the case alluded to several of the miners narrowly escaped with their lives whilst exploring the workings, with the object of rescuing those in them, and at one time it was as much as the medical men could do to bring them round again. The fire broke out in the vicinity of the waste pipe, and soon extended, so that it was found necessary to send a good deal of water to the bottom, as well as to brick up some of the air-ways. This will cause a serious loss, not only to the miners but also to the owners. Of the destructive character of a fire taking place in a colliery we have an instance in the one that occurred at Darfield Main, near Barnsley, at the close of 1872, which had to be sealed up for several months, resulting in a loss to the owners of more than 100,000. Now, had some of the machines of DENAYROUZE, or "L'Extincteur" of DICK been available, all that great loss would have been saved. So it would have been, we have little doubt, at Kilburn, where the explorers might have passed through the deadly gases and put out the fire had they been provided with the means now placed within the reach of colliery owners by the inventions to which we have alluded. M. DENAYROUZE and others have solved the problem of breathing and affording light to men in mines in the midst of the most deadly gases. The invention of the former consists of an air-pump, with an air tube wound on a self-regulating coil, with a lamp specially adapted for the work it has to do. There is a regulator, to be carried on the back of a man, and which provides the air necessary for the bearer of it, as well as for maintaining the light. The lamp burns in an atmosphere wholly independent of that of the mine, the air coming from the regulator being always exempt from carburets of hydrogen. In exploring a mine, the man has a breathing tube fixed under the air-chamber, and, putting it into his mouth, draws his supply of air through the regulator at such pressure as he himself finds necessary for his own comfort. The eyes are protected from danger by means of a simple and convenient arrangement. Thus equipped, a man can penetrate the workings of a colliery for a considerable distance, and work in an inflammable atmosphere with the greatest safety, for an almost inexhaustible supply of pure air can be assured to him at almost any distance he may be from the mouth of the pit. By this means work, it appears, can not only be carried on in a place charged with gas but also under water—an object of very great importance indeed. We are glad to find that the value of the invention of M. DENAYROUZE is being recognised by our colliery owners, for some experiments we recently witnessed with it were most satisfactory, proving that there is no difficulty whatever in exploring the workings of a mine after an explosion or a fire, for the purpose of saving life or preventing the destruction of valuable property.

Another very valuable invention is that known as DICK'S chemical, portable, and self-acting fire-engine, "L'Extincteur," several of which are now to be found at a great many collieries, in Yorkshire in particular. A few days since, whilst in Manchester, we had the opportunity of thoroughly examining those machines, having previously seen one tested in the extinguishing of a fire, in which the combustibles were wood saturated with tar. It was really wonderful to see how quickly the fiercely burning mass of inflammable material was overpowered by the gaseous water thrown upon it. The experiment was made in the South Yorkshire district, where the collieries are the most fiery in the kingdom, and in the presence of a large number of the principal colliery owners in the West Riding. There was but one opinion expressed—that nothing could be better adapted for putting out fires that might take place either on the surface or underground. It is, therefore, not surprising to find that orders were secured for a large number of the extinguishers and air-bag respirators, which are now to be found at the well-known Oaks Colliery, Messrs. POPE and PEARSON'S, Messrs. BRIGGS and Co. (Limited), the Thorncliffe Collieries, and many others in Yorkshire and Derbyshire. The chief merit of the invention consists in the introduction of carbonic acid gas, generated in an air-chamber, and held in solution by water. The immediate propulsion of the gaseous fluid upon the fire when the carbonic acid gas is evolved causes the almost instantaneous extinction of the flames. The extincteur consists of a cylindrical-shaped vessel, with an aperture for charging it with chemicals, and tap and tube for directing the contents on to the fire. It is filled with water, which becomes, by the admixture of two chemicals, densely charged with carbonic acid gas. When the water reaches the fire the gas is evolved, and immediately, by the displacement of the oxygen of the atmosphere, destroys the flames. Placed, or rather strapped, on the back of a man it can be successfully used, or, along with the patent air-bag respirator, mines filled with gas can be explored, and successfully used in extinguishing such a fire as that alluded to in the early part of our notice. The "air-bag" consists of an air-tight bag simply, and is suspended on the back by means of shoulder-straps, and filled, by means of a pair of bellows, in less than two

minutes with air sufficient to last for 10, 20, or 40 minutes. The moderate prices of DENAYROUZE'S, DICK'S, and similar apparatus, should ensure their being found at most of our collieries. The inventions we have here drawn attention to strongly recommend themselves to the consideration of colliery owners and others as most important guards in case of fires or accidents in coal or other mines.

#### AMERICAN COAL.

Every now and then we receive glowing accounts of the coal wealth of some of the Southern States of the American Union, and especially of the States of Alabama and Virginia; yet somehow or other this coal remains unworked. Virginia has coal mountains, but they remain comparatively untouched; and the naturally proud and haughty Virginians—for the "first families of Virginia" are the most aristocratic of Americans—are not above confessing that their Commonwealth is too poor to be in a position to pay the full amount of interest upon their State debt. Is there any connection between untouched Virginian coal and depreciated Virginian credit? We think there is, and that until the Virginians can be brought to see the rigid necessity which devolves upon them of sacredly maintaining the public credit of their Commonwealth its resources will remain neglected, and the State will vegetate in its present pitiable poverty. In 1865 or 1867 we could make some allowance for Virginian defaults. The State had borne the main shock of a great civil war, and was bleeding at every pore from the terrible wounds which the fratricidal conflict had inflicted. But we find it difficult to make any allowance for Virginian discredit in 1874. Seven years of comparative tranquillity ought to have sufficed to efface the traces of the great duels fought between LONGSTREET, STONEWALL JACKSON, and LEE on the one side, and McCLELLAN, MEADE, and GRANT on the other. The green grass now waves luxuriantly over Virginian battle-fields, and another generation has almost sprung up and made good the gaps which the great war occasioned by too many family fire-sides. Nevertheless, Virginia is only doing out to her creditors a miserable apology for the interest which is due to them, and she has solemnly placed on record in an act of her Legislature the humiliating admission that this is "all that the Commonwealth is able to pay at present." Virginian indolence seems to outweigh Virginian self-respect; the Virginian public has too weak an appreciation of the force of credit to raise a sufficient amount of revenue either by loans or taxation to enable the State Treasurer to fulfil the public obligations, and the consequence is that Virginia remains a State avoided by observant capitalists on both sides of the Atlantic.

What holds good of Virginia applies with probably even greater force to Alabama. Englishmen have always felt a kindly interest in Virginia, but they know very little of Alabama. Nevertheless, what they do know of that State is, unfortunately, little favourable. It is not so long since that a railroad loan was brought out in England—and, we believe, also in France—under the style and title of Alabama and Chattanooga Railway Eight per Cent. Bonds, guaranteed by the State of Alabama. The bait of 8 per cent. was greedily swallowed by the class of needy small investors who fancy that somehow or another a kind and merciful Providence will supply them with investments yielding a secure interest of 8 per cent. per annum. The Alabama and Chattanooga bondholders found themselves miserably deceived. The State shuffled off the pretended guarantee; and, instead of being blessed with 8 per cent. coupons regularly paid, the unfortunate bondholders found themselves cursed with an abundant harvest of wearing anxieties. The latest advices certainly seem to point to something like tardy justice. The road has been seized and sold, and a promise is given that the arrears of interest due upon the bonds shall now be paid. This is satisfactory so far as it goes; but it is still not clear that the capital represented by the bonds is equally secure, and, moreover, a shock has been given by the whole transaction to the credit of Alabama, from which the recovery must necessarily be slow and painful. The effect of Alabama financial mud-dling—to use a comparatively mild expression—is seen in the neglect of Alabama coal resources, which are just as much passed over as the coal deposits of Virginia. Yet Alabama is said to have one coal field, the Black Warrior, which embraces about 5000 square miles, and yields a bituminous coal, which burns freely, cokes well, and makes good gas. If Alabama coal and Alabama iron were fully utilised, Alabama would be a far more prosperous community than it is at present. But then the old difficulty crops up. Alabama is heedless of the laws of credit; either she does not know them, or, if she does, she suffers her public men to fritter away her financial good name.

#### LIGHT AND ECONOMIC TRAMWAYS.

Reference was made in the *Mining Journal* of April 25 to an improved method of transport without breaking bulk on mixed-gauge railways, invented by Mr. JOHN WALKER, of James-street, Old-street, and the patents having now been completed some further details of the invention can be given. The first object of the invention is to make the top surface of the rail as low as possible to the ballast, to prevent the wheels from jarring the sleepers or bottom frame of the railway. To accomplish this each sleeper is notched out by four circular saws from 2 in. to 3 in. deep, and to the exact gauge required for the railway. These notches or grooves cut across the sleepers are to receive the rails, and may be so made as to fit down tight, or have space for a wedge on the outside. The rail is formed of one piece of timber in the centre, and an iron plate on each side, and is called the composite rail. The timber may be 3 in. deep by 1½ in. thick, and the two plates of iron 3½ in. deep by ½ in. or 3-16 in. thick; these plates are either rivetted or screwed together on the timber, taking care that no joint of iron or timber rests upon the same sleeper. In this way we have a continuous rail without a butt joint, which not only makes a strong rail but also the most pleasant to travel on, having just enough elasticity to secure that purpose. By placing the rails into the sleeper instead of on the top, they form in themselves a complete frame independent of spikes or screws to whatever length they may be carried, and as each sleeper is exactly alike, the rails will also be perfectly true, so that the wheels of the engine may fit exactly, instead of oscillating from side to side, doing more damage to the rails than the weight of the engine.

For general traffic the head of the rail is formed either of angle-iron or a steel cap, bolted through the rail with bolts and nuts, care being taken that the joint is not over any other joints of the rail; in this way when the cap wears out it is easily renewed without disturbing the framework of the rails, and at a very small cost, and great saving in labour and materials, thus rendering this invention of the greatest importance for branch lines, and also wherever railways are required to open up new countries, when the cost would, it is estimated, amount to about one-half that of the present system. From a series of carefully conducted experiments made by Mr. David Kirkaldy, it appears that, taking the centre between the sleepers, a rail 3½ in. deep is equal to 9 tons; 4½ in. deep, 14 tons; and 5 in. deep, 18 tons. There would, of course, be a great saving of freight when exported, and in laying down a line in the cost of labour and time, there being no chairs, fish-plates, trenails, &c., required. For the construction of light and cheap lines for bringing down ore, &c., from mines in sparsely populated districts the system appears well worthy of attention.

**SUB-WEALDEN EXPLORATION.**—Relying on the receipt of further subscriptions, it has been decided to continue the boring to a further depth of 200 feet. The contract with the Diamond Rock Boring Company was completed when a depth of 1000 feet was attained. The attainment of this depth was slightly delayed towards the end by some of the boring rods slipping. At a committee meeting of those interested in the work, Prof. Ramsay in the chair, a letter from the Diamond Rock Boring Company, dated June 17, was read, offering to continue the work to a further depth of 200 ft. at 2½ per foot, the same price as hitherto paid, but stipulating that they should have the option to discontinue the boring in the event of any unexpected difficulties arising. Should lining be considered necessary, the company asked that the committee should do their best to find the money to enable them to put it down past the bad part of the hole. The

hon. secretary reported that they had no funds in hand to continue the work, but he offered to become personally responsible for the cost of the extra 200 ft. His offer being accepted, he was requested to issue another appeal for subscriptions. In doing so, he urged upon "all who like to be considered generous, enlightened, wise, and good, to vie with each other in contributing to complete this, the first boring for scientific purposes in England."

**JOINT-STOCK COMPANIES ACT—PROMOTERS' PROFITS.**—A decision was given by Vice-Chancellor Malins on Thursday which, if taken as a precedent, will effectually prevent the formation of any public company whatever, and inflict irreparable injury upon the entire commercial community. Henry William Askew, a sub-scriber for shares in the Ruby Consolidated Mining Company (Limited), applied to have his name removed from the register on the ground that the prospectus of the company did not state the price at which the vendor had himself originally purchased the property. Vice-Chancellor Malins has decided that this is sufficient ground for a shareholder to claim the removal of his name from the register, and made an order accordingly, as will be seen from the report of the case which appears in the Supplement to this day's Journal. That there are many reasons which would entitle the subscribers for shares in this particular company to have their names removed from the register need not be denied, but that upon which the Vice-Chancellor gave his decision was certainly not one of them. The contract between Hartmont and Heynemann was not such a contract as the Companies Act requires to be recorded in the prospectus; but whether Hartmont, being a director of the company, could make the purchase in his individual capacity is another question. That the attempt to realise a profit of 245,000 upon an outlay of 40,000 was extravagant cannot be doubted; but the public (excepting a very few individuals of questionable intelligence) protected itself by not subscribing for the shares. As a matter of fact, the public subscribed so little that the company could not carry on the business proposed. The Vice-Chancellor seems to have condemned a principle (though every man who buys and sells expects a profit) upon the strength of an individual case of overcharge.

**OUTLYING GOVERNMENT SECURITIES.**—A Parliamentary return of dividends, charged last year under schedule C of the Income Tax, serves in some measure as a map of the positions of British capital in outlying Government securities. The return shows what amounts were charged to the tax under the head of annuities or dividends payable out of the public revenue of the colonies or foreign countries. According to this, Englishmen have nearly as great a pecuniary interest in Indian public securities as in those of all foreign countries whatsoever. The amount of Indian dividends charged with the tax was 7,032,247; that of foreign dividends, 9,341,193. The colonial dividends charged make a much smaller total—2,839,776. Analysing these sums we find that Belgium, as a State, is fortunate enough to owe us scarcely anything; at any rate, the Belgian dividends taxed amounted to but 287. The comparison with Turkey is inevitable, and of course striking—1,747,657. It is rather surprising, however, to find that Turkey's great rival yielded our taxpayers a still larger revenue, for the sum set down to Russian dividends is 1,825,333. Egypt comes after Turkey, with 1,308,311. Spain paid us but 759,066—less by a long way than what she owed us, we may be sure. The United States contributed 209,095. Turning to the dependencies of the British Crown, we find that Canada (Quebec and Ontario) contributed 630,634, in dividends, on which an income charge was made, and Victoria nearly as much—582,247. New South Wales and New Zealand are down for considerable sums, but South Australia paid only 102,914. Taxpayers who grumble that they have had to pay upon so much ought, perhaps, to be thankful that they have had so much to pay upon.

**THE COAL TRADE.**—According to the Parliamentary returns, the total exports during 1873 of coals, cinders, and patent fuel from the United Kingdom to foreign countries and British settlements were 12,617,566 tons, with a declared value of 13,188,511. In the list of ports from which this vast quantity was shipped Newcastle takes the first place, with a total of 3,217,152 tons, followed by Cardiff with 2,684,205 tons, and Sunderland with 1,441,412 tons. Swansea shipped 755,487 tons; Liverpool, 591,363 tons; and North Shields, 475,050; but Ireland altogether only exported 1278 tons, the shipping ports being Dublin and Belfast. Of foreign countries procuring their supply of fuel from the United Kingdom, France imported 2,479,421 tons; Germany, 1,661,680 tons; and Italy, 802,992 tons. Among the remainder Russia took 612,269 tons; Sweden, 532,442 tons; Denmark, 593,192 tons; Egypt, 547,549 tons; Brazil, 335,661 tons; and Spain, 619,248 tons. The total quantity of fuel exported during the year was made up of 12,077,507 tons of coal, 281,649 tons of cinders, and 278,410 tons of patent fuel. On the authority of the Registrar of the Coal Market it is stated that 7833 tons of coal were brought to London during the year, 2,665,680 tons being carried coastwise, and 7,167,458 tons by inland navigation and by railways. As the exports from London were only 64,490 tons, it follows that the annual wants of the metropolis alone are more than equal to half the total exports from Great Britain to foreign countries. After London, Dublin takes the largest quantity of coastwise-borne coal, the requirements of the Irish metropolis during 1873 being 805,000 tons, while Belfast absorbed 786,940. Next in order came Plymouth, with 355,508 tons; Bristol, with 342,263 tons; and Bridgewater, with 306,355 tons. The total amount of coal borne coastwise was 9,928,569 tons, to which the amount of fuel exports to foreign countries being added, gives 23,119,088 tons as the quantity carried in vessels during the year, or sufficient to freight nearly 100,000 collier brigs of 250 tons burthen each.

**COAL AND IRON IN THE UNITED STATES.**—The Concord Railway Company has contracted for 500 tons of new steel rails, which will be laid in the main track in the course of the summer, in continuation of those hitherto laid. This will nearly complete one track of steel between Concord and Manchester. The coal movement of Pennsylvania to May 23 this year was 7,584,291 tons, against 7,448,494 tons in the corresponding period of 1873, showing a decrease that year of 159,403 tons. There are two distinct, well-defined coal fields in the State of Alabama, differing alike in quantity and quality; they are known respectively as the Black Warrior and the Cahaba fields. The first embraces about 5000 square miles, and yields a bituminous coal, which burns freely, cokes well, and makes good gas. The Cahaba coal field lies for the most part between the Selma, Rome and Dalton Railroad and the Cahaba river, and it yields a better coal for general use than the other, although it is more expensive to mine on account of troublesome bands of shale. About three-fourths of the Alabama coal used in the State comes from two mines in the Cahaba field.

**THE MINING INDUSTRY IN PORTUGAL.**—Since the publication of the law of Dec. 31, 1852, the working of mines in Portugal has been carried on with considerable activity, and there has been a great stimulus given to the mining industry. Still, this great source of natural richness cannot yet be considered to have been thoroughly developed in Portugal, and, doubtless, will never be thoroughly developed until projected railways, &c., are carried into execution, and then, under the able mining engineers, together with the all-powerful assistance of capital, the industry cannot fail to progress to a very great extent. It may be stated, however, that already the mineral richness of the soil of Portugal has attracted the attention of English engineers and capitalists, as well as those of France. A society of the Brussels has despatched there an engineer—M. Desquins, formerly secretary of the Industrial Museum, and who is well up to the work—and it is stated that he has already succeeded in his researches, and that he has discovered numerous mines of manganese, &c., which will be shortly put into exploration. It is estimated, with regard to the Portuguese mines, that the number of those the existence of which has been ascertained with certainty is 611, which are divided into the following classification:—Mines for which the concession has not yet been obtained, 106; mines of which the right of working has been in a manner reserved, 106; mines which have obtained a provisional concession, 79; and mines which have obtained a definite concession, 189. It will thus be perceived to what extent the mining resources of Portugal have been, so far, developed. Of the number above mentioned there are, according to official statistics, only 88 in active working, whilst there were only 48 worked. In the year 1865 the copper mines worked numbered 12; in 1872 they were 16; lead mines, in the year 1865, 6; in 1872, 9; tin in the year 1865, 6; in 1872, 5; iron mines, in the year 1865, 5; in 1872, 10; manganese, in the year 1865, 4; in 1872, 9; and in 1872, 10. The increase of late in the working of the last-named mines is especially noteworthy. The Transtagnana Company, which ranks at the present time amongst the most im-



The Copper Ore Trade fluctuates considerably. At the Swansea Ticketing, on Tuesday, as compared with the previous sale, there was an advance of 18d. in the price per unit of produce, and of 16s. 9d. in the standard, calculated for 9 per cent. produce. The aggregate of the sales reached 1000 tons, which realised 12,800l. 5s., being at the rate of 14l. 2s. 9d. per ton.

June 24.—Little change has taken place in the state of our market since the date of our last report. The price of Warrants has fluctuated between 92s. 6d. and 101s. 6d., at which price buyers remained yesterday afternoon. To-day business was done at 99s. Friday, and 90s. Monday; at the close there were sellers at 101s. 6d. cash tomorrow. It will be observed from the undernoted figures that the exports since Christmas have decreased 128,000 tons, and that the imports have increased 30,500 tons as compared with the same period last year. The stock in store is now 37,800 tons, being an increase during this month of 12,600 tons.

The three greatest iron and steel companies in Sheffield held their annual meetings on Wednesday, the results of which were looked for with much interest in consequence of the crisis in the iron and coal trades, and, as was anticipated, they proved that the work of the year in the heavy trade in Sheffield has not been successful. Considerable loss, owing to the excessive price of fuel and the severity of foreign competition, has accrued to some of the companies. Messrs. J. Brown and Co. (Limited) only declared a dividend of 5 per cent., having for the two previous years paid a dividend of 15 per cent., and Messrs. Consett and Co. paid a dividend of 10 per cent. on the year, but they were enabled to do so chiefly because they had purchased a colliery of their own, from which they raised 10,000 tons of coal weekly at a profit. The other company, Messrs. Consett, steel, iron, and wire works, at Tinsley, showed a loss on the year's working of 69547, chiefly in consequence of the excessive price of fuel. The vendors in this case offered to relinquish their claim of 11,325, owing to them by the directors for transferred contracts, and the offer was accepted. By this handsome offer the directors were enabled to declare a dividend of 10 per cent. At the meeting of Messrs. Brown and Co. (Limited) the severity of foreign com-



petition in the heavy trades was commented upon, and it was stated that railway material could be bought in Belgium at about 25. less than it can be made in Sheffield.

**LANCASHIRE COLLIERY MANAGERS TAKEN FOR "BLACK SHEEP."**  
—A singular and amusing hoax took place at Dodworth, near Barnsley, which threw the whole of the Barnsley coal field into a state of great excitement throughout the whole of Friday and Saturday. It will be remembered that the miners at the Church Lane Colliery, Dodworth, have been out on strike against the award of an umpire, and in defiance of the Miners' Union of which they are members. Early on Friday morning from 20 to 30 persons alighted at the Dalworth Station by train from Manchester, and were seen to go to the colliery, accompanied by Mr. Higson, the mining engineer. The men who were on the look-out at once concluded that they were new hands, or "black sheep," as they termed them. A "black sheep" was fixed to be held at Barnsley the same morning at ten o'clock. This was largely attended, and precautionary measures were taken with respect to the newcomers. All the speakers who addressed the meeting dwelt upon the arrival of the "black sheep" from Lancashire. The chairman begged of the men to be exceedingly careful not to interfere with the new comers, for he assured them if they only looked at them they would run the risk of being sent to prison. Another speaker said he was more amused at their appearance than annoyed, because they looked like men who would not do much work, and they need not be afraid, as they had gone down the pit in their "Sunday clothes." All the other speakers dwelt upon the appearance of the "fresh hands," and begged their companions to keep the peace. On leaving the pit, the supposed "black sheep" received the attention of the female portion of the community, who rang tin cans, &c., to salute their departure. On Saturday, the officials of the colliery were surprised at the reports in some of the papers, and it then transpired that the new hands were none other than some of the most eminent mining engineers and colliery managers from the Manchester, Wigan, and other parts of the Lancashire coal field, who visited the Church Lane, Darfield Main, Gorton Wood, and other collieries in the South Yorkshire district on the invitation of Mr. Higson, who is also largely interested in Lancashire collieries. We doubt not that the gentlemen will be more amused than informed by their visit to South Yorkshire.

#### TRADE OF THE TYNE AND WEAR.

June 25.—The Coal and Coke Trades have continued to manifest increased dulness in all branches; although actual quotations have not fallen much during the past week, it is apparent that coals of all kinds have become more plentiful. This is, to a great extent, to be attributed to the baneful effect of the miners' strike in Cleveland; still it must be confessed that the effect of the strike has not injured the trade so much as might have been expected, owing to the fact that the export trade for all kinds of fuel has been extremely good during the past few weeks. Best steam coals are still quoted at 18s. per ton, gas coals at 13s. per ton, and manufacturing coal at from 10s. to 12s. per ton.

As we ventured to hope, and stated last week, the efforts of Mr. Burt and other leaders of the miners in connection with the Cleveland mines have been crowned with success, and the men resumed work on Monday, at a reduction of 2d. per ton to piece men and 12½ per cent. to day men. This arrangement will continue in operation for three months, and should any disputed question arise during the present year it is agreed between the parties it shall be referred to arbitration. This favourable termination of the contest has caused the greatest satisfaction amongst all classes; and although the iron trade is in a most disorganised state, there is little doubt that an improvement for the better will shortly take place. Of course, some time will be required to get the works in full swing, and as many of the furnaces are out of the make of iron will be comparatively small; but there is little doubt that the furnaces only damped down will be got to work as early as possible, as a good demand for iron at a moderate price may be expected to spring up. Looking at the state of the iron making trade in all the other principal districts, this may confidently be expected. In South Staffordshire only 45 furnaces are in blast out of 152; in Scotland, out of 158 furnaces only one-half are now blowing. On the west coast of England the make of iron has been very much reduced, so that it is reasonable to suppose that when Cleveland iron can be produced at a moderate cost a good demand will spring up for it. As coals have fallen very considerably, and coke at least 120 per cent., and the cost of working the ore has also been materially reduced, it is evident that the iron smelters of this district will now have a better chance of competing with iron manufacturers, both at home and abroad, than they have had for the past three years.

#### REPORT FROM LANCASHIRE AND CHESHIRE.

June 25.—A curious case, arising out of an alleged promotion of a colliery company, came before the County Police Magistrates sitting at Manchester on Monday. Edward Hallas, an accountant, residing at Poole Chambers, South Castle-street, Liverpool, was charged with obtaining under false pretences the sum of 130l. from James Potter, and 65l. from William Allen, colliers of Worsley. Mr. M. Fielding, solicitor, Bolton, prosecuted, and Mr. Addison, barrister, defended the prisoner. The case for the prosecution was that the prisoner had advertised the advantages of a new colliery company, and by representing that he was negotiating for the purchase of an estate and mines belonging to the Mayor of Wigan, and that these were to be worked by the company, had induced Allen and Potter to advance money. The Mayor of Wigan proved that the prisoner had not purchased the estate referred to, although he had been in communication with his solicitor concerning it. For the defence it was contended that the prisoner had made a bona fide attempt to float a company. The prisoner was committed for trial at the sessions.

The Coal Trade is steady, and there is no immediate prospect of further reductions. The strike in the Ashton and Oldham district continues, but in other parts of Lancashire and Cheshire the men are working very steadily. There is no change to report in the Iron Trade; the masters here continue to benefit through the prolonged strike in South Staffordshire. Forges are moderately busy, and there is every likelihood of further improvement if trade will continue steady.

The Dukinfield explosion inquest stands adjourned to Saturday next, when it is hoped that it will be concluded.

**BLASTING UNDER WATER WITH DYNAMITE, EXPLODED BY ELECTRICITY.**—Considerable improvements and additions to the Severn and Wye Railway, at Lydney, have recently been completed under the direction of the company's engineer, G. W. KEELING, Esq., including an increase in the area of the lower floating basin of the harbour, the depth of water required having been 15 ft., and as this had to be accomplished without hindrance to the usual shipping trade, extensive blasting operations were executed under water. At the outset of the work, and for some little while afterwards, the contractor (Mr. W. F. Holbrough, to whom we are indebted for facts) used large cartridges of common blasting powder; these were deposited in holes bored through 3-in. iron tubes from a floating raft, and connected to Bickford's safety fuses long enough to reach to the surface of the water. By these means the rock was broken up into large pieces, which greatly impeded the action of the dredging machinery, exposing it to much risk and damage. Recourse was, therefore, had to dynamite in conjunction with electricity, and Brain's high-tension detonating fuses, on the system devised and successfully carried out at the Drybrook Iron Mine by Mr. W. B. Brain, of Cinderford, Forest of Dean. By this method of blasting, any number of charges may be exploded simultaneously, so that the contractor was enabled to vary the number and position of his bore-holes according to the nature of the work. One pound of dynamite was placed in every hole, and fuses were connected in circuit, and two insulated wires carried from them to a small dynamo-electric mine exploder on the shore, by which an explosion was effected. These blastings thoroughly pulverised the rock, and the dredger brought it up with ease, rapidly, and safely. The cost of removing the rock operated upon and placing it on the shore was with blasting powder 5s. 6d., with dynamite and electricity 4s. per cubic yard.

**PEAT FUEL.**—The lack of coal in the valley of St. Lawrence and in the Western States was not much felt while the population was comparatively small and American forests supplied abundance of fuel. But during the past year or two want has begun to be felt, and as the importation of coal is very costly, attention has been drawn to the immense peat bogs lying at intervals from Niagara to the Gulf of St. Lawrence. A correspondent of the *New York World* gives an interesting account of the excavation of this peat, and its conversion into fuel. The machine consists of a scow about 80 feet long, containing a 20 horse power engine, and floating in a canal 20 ft. wide, and from 3½ to 6½ ft. deep. This canal the machine excavates for itself by means of two immense augers which project from the front of the scow and cut their way into the turf. These augers are about 18 in. long, but of a diameter of 10 ft. each, and they work side by side. As they cut into the soft wet turf they throw it behind them on to a revolving band of buckets. These buckets convey it to the hinder part of the scow and drop it into a cylinder. In this cylinder it is mashed into a pulp by revolving hook-shaped knives, and then propelled forward by revolving vanes into what is called the distributor. This is a hollow cylinder, 80 ft. long, projecting at right angles from the side of the scow. In its centre and throughout its length revolves a shaft, on which are auger-shaped vanes. These latter propel the mashed-up pulp along the distributor, from which it falls through holes at distances of 20 ft. apart, and from the end, upon the surface of the bog, which has previously been prepared

for its reception. Here it is spread out to a width of 100 to 120 ft. and a depth of 8 or 10 in., by men armed with scrapers, and by horses, which drag through the pulp a board fastened by a rope at each end by a whipple-tree. The peat is now suffered to dry until a cut made on its surface will remain open, when it is scored across by two men, one on each side, who drag to and fro a revolving drum, whose circumference is furnished with circular knives about 4 in. broad, and distant from each other about 7 or 8 in. As soon as the sun and wind have dried it so that it may be handled it is cut up with sharp spades into bricks 8 in. long, and carried off by boys and stacked on ladders and laths, when the drying process is more rapidly completed. The process occupies about five weeks, and each engine turns out about 100 tons every day, at a cost of \$2 per ton. In the market the fuel fetches from \$5 to \$7 per ton, and it is found convenient in use, because it will either smoulder very slowly or burn fiercely, according to its treatment. The fuel is clean to handle, nearly as heavy as pit coal, and free from sulphur. The *New York World* adds that a patent has lately been taken out for the carbonisation of peat, by which means a very superior charcoal is produced. This process is regarded with much interest, as it will afford a means for the utilisation of iron ores, which smelted with such fuel will yield iron of a very superior quality.

#### WALLASEY GAS AND WATER WORKS. TO COAL MERCHANTS AND OTHERS.

**THE WALLASEY LOCAL BOARD are prepared to RECEIVE TENDERS for the SUPPLY of CANNEL and GAS COAL for their GAS WORKS, and STEAM COAL for their WATER WORKS, for a period of TWELVE MONTHS, delivered at the works, GREAT FLOAT, near BIRKENHEAD.**

Any further information may be obtained on application to the Engineer, at the said works.

The contractor will be required to enter into a bond with approved sureties for the due performance of the contract, which contract and bond will be prepared at the expense of the contractor.

Sealed tenders, addressed to the "Chairman of the Gas and Water Committee," and endorsed "Tender for Coal," to be left at my office, Church-street, Egremont, near Birkenhead, not later than Three o'clock in the afternoon of Wednesday, the 15th day of July next.

The Board do not bind themselves to accept the lowest or any tender.

By Order, T. SOMERVILLE JONES, Clerk to the Board.

Public Offices, Egremont, 22nd June, 1874.

#### PRUSSIAN MINING AND IRONWORKS COMPANY (PREUSSISCHE BERGWERKE UND HUTTEN-ACHTEN-GESSELLSCHAFT).

**PAYMENT OF INTEREST UPON PRIORITY OBLIGATIONS.**

THE SECOND HALF-YEAR'S INTEREST for the business year 1873-74 upon these Obligations can be RECEIVED on and after the 1st of July next, in amount of FIFTEEN SHILLINGS PER COUPON, at the offices of the company in Düsseldorf; or in London, Dublin, and Cork, at the National Bank; Berlin, at the Berliner Handels-Gesellschaft; Bremen, at Messrs. H. H. Meyer and Co.; Cologne, at Messrs. Sal. Oppenheim, jun., and Co.; Hamburg, at the North German Bank—in exchange for the Interest Coupon No. 6 of our Priority Obligations I. Emission, if already stamped as having received the first half-year's interest, and the Interest Coupon No. 2 of our Priority Obligations II. Emission. Coupon No. 6 of our Priority Obligations I. Emission which may not have been presented for the payment of the first half-year's interest will be paid with Thirty Shillings per Coupon.

**REDEMPTION OF PRIORITY OBLIGATIONS.**  
In accordance with the plan of amortisation of the Loan of £180,000 (5 per cent. Priority Obligations of this company), the following 60 numbers of the Partial Obligations I. Emission, which are to be paid off at par in the year 1874, were drawn by lot in the general meeting of the shareholders, held at Düsseldorf, on the 6th of December, 1873, in presence of a Notary Public and witnesses—viz., the numbers:

132	719	1662	2294	3182	3673	4556	4943	5363
223	949	1690	2529	3235	3713	4706	4972	5571
313	955	1777	2577	3306	3746	4613	5092	5618
339	986	2058	2630	3373	3783	4660	5109	5906
405	1247	2084	2799	3478	3959	4868	5120	5921
442	1268	2211	2822	3492	4227	4885	5169	
488	1573	2219	2978	3570	4332	4911	5218	
709	1620	2280	3050	3616	4412	4923	5294	

The paying off of the above Partial Obligations will take place on and after the 1st July, 1874, upon delivery of the respective Partial Obligations and the remaining Interest Coupons, at the company's offices in Düsseldorf.

After the expiration of that term all liability to the payment of further interest upon the above-mentioned Obligations ceases.

Düsseldorf, the 23rd June, 1874.

#### ISSUE OF 15,000 FIFTEEN PER CENT. GUARANTEED PREFERENCE SHARES, of £1 sterling each, in the YORK PENINSULA MINING COMPANY (LIMITED).

Full particulars of the above issue, also forms of application for shares, plans, and the latest reports from the mines, may be had on application to—  
J. GRANT MACLEAN, Stock and Share Broker, Murray-place, Stirling.

**URUGUAY BONDBHOLDERS will FIND some INTERESTING INFORMATION in the present number of "THE SHAREHOLDER," published by Mr. J. OWEN, No. 4, BISHOPSGATE STREET WITHIN, LONDON. A single copy, 6d. Write at once to the publisher.**

#### EIGHT PER CENT. PER ANNUM OFFERED UPON FIRST-CLASS LAND MORTGAGE SECURITY.

For prospectuses, and other information, apply to W. GUNDY, 2, Ashwood-terrace, Headingley, Leeds.

#### BAMFYLDE COPPER MINING COMPANY (LIMITED).

**FOR SALE, for cash, TWENTY-FIVE SHARES, fully paid, at £2 12s. 6d. per share.**

Apply, by letter, to "R. N.," 7, Bedford-gardens, Kensington, W.

#### GOLD RUN HYDRAULIC COMPANY.

**WANTED TO PURCHASE, THREE HUNDRED SHARES.**

Send lowest price to "L. J. S.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

#### MINING IN SPAIN.

**OWING to the present state of matters in Spain, several good MINES of IRON, ZINC, LEAD, and COPPER can be BOUGHT for a MERE NOMINAL SUM. As an investment these will pay handsomely with a little keeping.**

Address, Mr. Woods, Santander, Spain.

#### ZINC AND LEAD MINING IN SPAIN.

**THE OWNER of some VALUABLE LEAD MINING PROPERTIES, in an undisturbed district in Spain, WISHES to MEET with PURCHASERS, or PROMOTERS of MINING COMPANIES.**

Some of the mines are partially opened up, and producing good quantities of lead and zinc of very superior quality.

Address, Señor DON FELIPE MONTANECHEZ, Ripa 2, Bilbao.

#### VALUABLE SILVER-LEAD MINE FOR SALE.

The ore is very rich, containing 75 per cent. of lead and 40 ozs. of silver per ton of lead.

Address, "Silver-lead Mine," MINING JOURNAL Office, 26, Fleet-street, London.

#### BARYTES (SULPHATE OF), CRUDE OR GROUND, FOR SALE.

Apply to FORCE CRAG LEAD AND BARYTES MINING COMPANY, 69, Close, Newcastle-on-Tyne.

#### FOR SALE, by Order of the Executors, a SPLENDID 12-horse power BEAM CONDENSING ENGINE, by Middleton, London; highly finished, 14 in. cylinder, 2 ft. stroke, with pumps, governors, &c.; can be worked at high pressure.

For further information and cards to view, apply to A. KERLY, Esq., Solicitor, 14, Great Winchester-street, London, E.C.

#### WALKER'S COMPLETE QUARTZ CRUSHERS and AMALGAMATORS combined. The only way to extract Gold. Also, CALCINERS for PYRITES, RETORTS, &c.

12, JAMES STREET, OLD STREET, E.C.

#### RAILWAY CARRIAGE COMPANY (LIMITED).—ESTABLISHED 1847.

**OLDBURY WORKS, NEAR BIRMINGHAM.**

**MANUFACTURERS of RAILWAY CARRIAGES and WAGONS, and EVERY DESCRIPTION of IRONWORK.**

Passenger carriages and wagons built, either for cash or for payment, over a period of years.

**RAILWAY WAGONS FOR HIRE.**

**CHIEF OFFICES, OLDBURY WORKS, NEAR BIRMINGHAM.**

**LONDON OFFICES, 7, GREAT WINCHESTER STREET BUILDINGS.**

#### THE BIRMINGHAM WAGON COMPANY (LIMITED).

**MANUFACTURE RAILWAY WAGONS of EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract.**

EDMUND FOWLER, Sec.

#### WAGON WORKS, SMETHWICK, BIRMINGHAM.

\* Loans received on Debenture; particulars on application.

#### MR. CHARLES F. COLLOM, MINING ENGINEER, INSPECTOR OF MINES, &c.

TAVISTOCK.

#### MANAGEMENT OF THE SOUTH DEVON FIRE-CLAY COMPANY.

Patentee of COLLOM'S PATENT REVOLVING FRAME for DRESSING TIN, AMALGAMATING GOLD, &c.

INVESTMENTS IN MINES ARRANGED FOR CAPITALISTS.

#### SALE OF VALUABLE MINING PROPERTY, known as the EAST LLANGYNOG MINE, IN THE COUNTY OF MONTGOMERY.

Situate near the town of LLANRHAIDR, in the county of MONTGOMERY.

**MESSRS JOHN LEES AND CO. have received instructions from the Liquidator TO SELL, BY PUBLIC AUCTION, on Tuesday, at Eleven for Twelve o'clock, on Tuesday, the 7th day of July, produced, the WHOLE of the ABOVE VALUABLE PROPERTY, in One Lot, as a going concern, held on lease for 21 years, 15 of which are unexpired.**

This property is very extensive, and offers unusual facilities for economical and expeditious working. Many thousand pounds have been expended in opening up the various lodes contained in the sets. Several hundred fathoms of levels have been driven in the mountain, which is over 800 feet high.

The plant and materials consist of a 30 ft. WATER WHEEL, with a 3 ft. breast; two smaller ditto; smiths' and carpenters' shops, with tools, &c.; &c.; between water courses and leets; dressing floors and sheds; three houses; offices; store rooms; powder house; for stabling for live horses; and numerous sheds; three able horses; wagon, cart, phaeton, &c., &c.

Full particulars may be obtained of the solicitors, A. D. SMITH, Esq., 31, Great James-street, B.-road Row, W.C.; and CHARLES KEARSEY, Esq., 23, Broadwood-street, Manchester; or of the Auctioneers, 86, London Wall, London, E.C.

P.S.—Written orders to view the mine from the Auctioneers only.

#### THE COMPANIES ACTS, 1862 AND 1867.

#### IN THE MATTER OF THE GEM TIN MINING COMPANY (LIMITED).

**THE LIQUIDATOR of the ABOVE-NAMED COMPANY invites TENDERS for the PURCHASE of the WHOLE of the PROPERTY belonging to the said company, comprising the COMPANY'S INTEREST in the LEASE of the MINE known as the GEM TIN MINE, in the parish of Whitelake, near Tavistock, in the county of Devon.**

The mine has been extensively opened, and is complete with all necessary machinery. One great advantage, the whole is worked by water, and all steam machinery saved.

The plant consists of WATER WHEELS, pitwork, and fittings in the shafts and levels, stamping and dressing machinery, wagons and tramroad, and all necessary appliances, tools, &c., for carrying on an extensive mine.

Tenders to be made separately for the lease and plant, addressed to the Liquidator, as below, to be sent in on or before the 20th instant.

Permission to inspect the mine, full inventory of plant, and all further particulars, with conditions of sale, may be obtained of the Liquidator.

FREDERICK WARWICK, at his offices, 25, Bucklersbury, London, E.C.

#### TENDERS are INVITED for the PURCHASE of a VALUABLE TIN MINE, together with the LEASE of the SETT, the WHOLE of the valuable ENGINE, PLANT, patent DRESSING MACHINERY, BUILDINGS, and PITWORK, fitted in two shafts to the 150 ft. level, and complete underground rails and plant. The property is situated in a well-known district of Cornwall.

The mine has been opened to a great extent, and has returned large quantities of tin. Even on the workings since January last the sales of ore have more than paid working cost.

Full particulars and orders to view will be given to principals or their solicitors on application to Mr. FREDERICK WARWICK, 25, Bucklersbury, London, E.C.

#### AN EXCELLENT OPPORTUNITY FOR FINANCIAL AGENTS, SYNDICATES, OR CAPITALISTS.

#### NEW PEMBROKE TIN AND COPPER MINE, In the parish of ST. BLAZEY, CORNWALL.

**FOR SALE, as a going concern, that portion of the Mine called EDGECUMBE, now worked by flat rods attached to New Pembroke 50 in. pumping engine, and which mode will be still applicable for working Edgcombe by payment of a small rental, to be arranged between the buyer and seller.**

Edgcombe's portion of the mine has been re-opened to a depth of 131 fathoms, the different levels and shafts have been cleared and securely timbered, and other expenses incurred at a cost to the present shareholders of about £5000. Only about 12 fathoms more of the shaft remain to be cleared, so to reach the bottom of the mine, where the prospects of finding mineral are very encouraging. Nearly forty years ago the mine was successfully worked for copper only, and about £10,000 dividends are said to have been declared. Tin mining at that period in deep mines was very little attended to.

A good lode for tin is now being worked in the adjoining Western Mine, called Wheal Eliza, in the 75 ft. level, close to the boundary of Edgcombe's.

This contemplated sale has been determined on in consequence of the disinclination of the largest shareholder to further develop the property (good reasons for which can be given), although many of the other shareholders are anxious to continue their holdings by joining others, for the purpose of accomplishing the main object first intended—viz., to see the bottom of the mine—which can be accomplished within a few months, and then sink it deeper.

At the meeting of New Pembroke shareholders, held on the 6th instant, a committee was formed for making the necessary arrangements for disposing of the property within one month. It is considered that the present opportunity is an excellent one for financial agents or capitalists.

The following mines, situated in close proximity to Edgcombe's, and all within a distance of one mile, have sold copper and tin to the value of many millions of pounds sterling, and have paid during their respective workings the enormous profits set opposite their names—viz.,

Edgcombe's former working about	£150,000
Charlestown Mines (now again working)	200,000
Par Consols Mine	220,000
Pembroke Mine	120,000
Great Crinnis Mine	180,000
East Crinnis Mine	110,000
New Pembroke, now working, dividends declared about	5,000

Total, £985,000

\* Now being discovered within the last two months a very rich lode of copper, now being taken away, worth upwards of £400 sterling per fathom, with every prospect of a continuance.

For further information, apply to the Purser, Mr. JOHN POLKINGHORNE, Tywardreath, Dated 11th June, 1874.

#### FOR SALE, LEASE, OR IN PARTICIPATION WITH CAPITALISTS desirous of interesting themselves in FOUR GOOD IRON ORE CONCESSIONS, situated in the SOUTH OF SPAIN, on the sea-board, and showing by latest analyses from one portion thereof over 60 per cent. of metal, with prospects of opening them out into most extensive and productive mines, which, from their immediate proximity to the sea, where vessels of the largest class can be loaded, and the mineral shipped at a very moderate cost, recommends itself as a good investment, particularly to a Mining Engineer with a knowledge of the work, who would invest in participation with one or more of present proprietors, who are desirous to retain their interest therein, and undertake the sale of the ores, provided such a suitable person could be found to undertake the management in Spain. Further particulars on application to—

JOHN P. BEST AND CO., Antwerp.

#### STEAM-ENGINE AND WATER-WHEEL FOR SALE.

**TO BE SOLD, BY PRIVATE CONTRACT, at NEW CROW HILL MINE, St. Stephen's, Cornwall, a 14 in. cylinder STEAM ENGINE, with BOILER, about 6 tons, very good.**

Also, a 30 ft. WATER WHEEL, 6 feet breast, iron ring, prime oak axle, with good cast-iron centre ends, sockets, plummer blocks, brasses, &c., complete. Apply to W. BROWN, St. Austell.

#### SLATE QUARRY FOR SALE.

**A SLATE QUARRY FOR SALE, which has been worked for upwards of two years, with a view to the vein, which has turned out to be a FIRST CLASS SLATE ROCK, of immense magnitude, and situated in the immediate vicinity of the celebrated Penryn Slate Quarry.**

For particulars, apply to E. WYNN GRIFFITHS, Esq., 3, Ogwen-terrace, Bethesda.

#### SLATE QUARRY TO BE LET.

**THIS IS AN UNDOUBTED VALUABLE QUARRY, if properly opened. It is situated within half a mile of the Pensarn Station, on the Cambrian Railway, and one and a half mile of the town of HARLECH. Samples of the slates are on the bank, and also at the Hotel, Tremadoc, and the Abbey Arms Hotel, Festiniog. Four months' trial will be given.**

Apply to Mr. G. RICHARDS, Rock-terrace, Harlech, Merionethshire.

#### FOR SALE, ONE 50 in. cylinder PUMPING ENGINE, 10 ft. stroke in cylinder, 8 ft. in shaft, with ONE BOILER, ONE 24 in. cylinder WINDING ENGINE, 8 ft. stroke, ONE BOILER and DRAWING CAGE, complete.

Apply to Mr. WILLIAM LANGDON, Northumberland Foundry, Lancaster, Cornwall.

#### MINING MACHINERY.

**MESSRS. F. W. MICHELL AND CO. have FOR SALE several CORNISH PUMPING, STAMPING, and WINDING ENGINES, of different sizes; BOILERS from 6 to 12 tons each; PITWORK of all sizes; CORNISH CRUSHERS; STAMP AXLES; IRON FLAT-RODS; STRAPPING PLATES; and other MATERIALS in general use in Mines, &c.**

EAST CARN BREA, REDRUTH, CORNWALL.

#### MINE ENGINES FOR SALE.

A 60 in. cylinder PUMPING ENGINE, 9 ft. stroke in, 7 ft. out, with THREE good 11 ton BOILERS.

A 24 in. cylinder STAMPING ENGINE, and 9-ton BOILER, with TWO new FLY-WHEELS, and 35 heads of STAMPS, complete.

A 40 in. cylinder PUMPING ENGINE, 10 ft. stroke in, 9 ft. out, with 10 ton BOILER.

A 15 in. cylinder WINDING ENGINE, and 8 ton BOILER, with cage, &c., complete.



JUNE 27. 1874.

## CORNWALL.

PARISHES OF BLISLAND, HELLAND, AND ST. MABYN,  
NEAR BODMIN.

**MR. C. E. PEARCE (Auctioneer) WILL SELL, BY AUCTION,**  
at the Royal Hotel, (Sandoe's), Bodmin, on Thursday, the 24th day of July, at Three o'clock P.M., the FREE SIMPLE OF THE FOLLOWING FARMS:—  
Lot 1.—TRESWIGGER, in the parish of Blisland, 60 A. 2 R. 28 P., occupied by Mr. Thomas Bate for a term ending at Michaelmas next.  
Lot 2.—SOUTH KERROW, in Blisland, 12 A. 1 R. 27 P., occupied by Mr. Thomas Bate for a term ending at Michaelmas next. There are indications of china-clay on this estate.  
Lot 3.—SOUTH KERROW, in Blisland, 9 A. 0 R. 33 P., held by Mr. William Harris for a life, now aged 81, at a conventional rent of 6s.  
Lot 4.—SOUTH PENQUITE, in Blisland, 16 A. 2 R. 7 P., occupied by Mr. Harris Coppins for a term of 21 years from Michaelmas, 1867, with comonable rights over SOUTH PENQUITE MARSH. There are stream tin and indications of china-clay in this lot.  
Lot 5.—COCK'S TENEMENT, in the parish of Helland, 48 A. 3 R. 13 P., held by Mr. Nickel for a life, aged 76, at a conventional rent of £1 11s. 6d. The tithes on this lot are covered by a modus of 10s. per annum.  
Lot 6.—SLOPER ROCKS' TENEMENT, in Helland, 36 A. 2 R. 33 P., held by Mrs. Nickel for a life, aged 78, at a conventional rent of £1 7s. 6d. The tithes on this lot are covered by a modus of 10s. per annum.  
Lot 7.—LOWER KERNICK, in PENNINGTON'S KERNICK, otherwise STONEY TOWN, in Helland, 47 A. 1 R. 8 P., occupied by Mr. Joseph Stick, for a term of 14 years from Michaelmas, 1867.  
Lot 8.—BODWYN, in Helland, 57 A. 2 R. 18 P., including four-sixths of BODWYN DOWNS, occupied by Mr. Stephen Bate, for a term of 14 years from Michaelmas, 1867.  
Lot 9.—DECOVEN, in the parish of St. Mabyn, 96 A. 0 R. 18 P., occupied by Mr. Henry Mills, for a term which ends at Michaelmas next.  
Lot 10.—The above lots, with all the other particular details of the estates and maps, with application to the Auctioneer, at Bodmin; and information can be obtained on application to Mr. Nicholas Whitley, Truro; Francis Huxy, Esq., at Trevelick, near Bodmin; Mr. Nicholas Whitley, Truro; or Messrs. Roper and Cornish, Solicitors, Penzance.  
Dated 25th May, 1874.

## SALE OF A VALUABLE LEAD MINE IN NORTH WALES.

**MESSRS. CHURTON, ELPHICK, AND CO. WILL SELL, BY AUCTION** (by order of the Mortgagees), at the Grosvenor Hotel, Chester, on Tuesday, the 14th day of July, 1874, at Two o'clock P.M. most part of the LEAD MINE known as the

## GLAN ALUN MINE,

Situate at Glan Alun, about three miles from Mold, in the county of Flint, held under lease for terms of 21 years, dating respectively from Michaelmas, 1866, and Christmas, 1866 (which can be extended if desired), together with the VALUABLE PLANT AND MACHINERY thereon, comprising water-wheel, 40 ft. diameter, 11 ft. head; new and powerful turbine; an excellent new shaft, 12 ft. diameter, sunk to the depth of 116 yards; tramway from pit to dressing floors, with 16 ft. incline ropes; washing and dressing floors; excellent ore store; house, smithy; office; store rooms; pumps; rods; launders; smiths' tools; office furniture, &c., and all other appliances complete, ready to set to work at any moment, and at a trifling cost.

The mine has been only partially developed, but so far as explored has proved very productive, and it is confidently believed it requires only a moderate expenditure to make it one of the best mines in the district.

The best comprises about 150 acres, with a length of about one mile from east and west on the course of the road, which in the neighbouring mines has been one of the most productive in North Wales, and from which in this mine, in its undeveloped state, large quantities of ore have been raised.

The mine has the great advantage of being worked solely by water-power. For further particulars, apply to Mr. James Wakefield, Coal Exchange Chambers, Chester; Messrs. KELLY, KEENE, and ROOPER, Solicitors, Mold; Messrs. Walker and Smith, Solicitors, Chester; or the Auctioneers, Chester.

## MINING MACHINERY, MATERIALS, &amp;c., FOR SALE.

## TRELYON CONSOLS MINE, ST. IVES.

**TO BE SOLD, BY AUCTION (unreservedly), on the Mine, on Tuesday, the 30th day of June, 1874, at Twelve o'clock at noon, in suitable lots, convenient to purchasers, all the**

## MACHINERY, PLANT, MATERIALS, AND EFFECTS

of and belonging to Trelyon Consols Mine, situate in the parish of Ives, comprising—ONE 40 in. cylinder PUMPING and STAMPING ENGINE, with ONE 11 in. BOILER, with cage, and a 16-head stamps axle and lifters, complete.

About 135 fms. of pitwork, of 4, 5, 6, 7, and 8 in. pumps.  
Top door pieces, H pieces, wind-bones, stuffing boxes and glands, bucket door piece.  
10 fms. 4 in. lifts.  
3 tons 10-lbms and ½ whim chain.  
2½ tons steam iron.  
4 tons staples and glands, flange and rod bolts.  
2 iron tram wagons; 1 wood ditto.  
1½ tons 1½ in. round iron rods.  
Shaft rods, ½ ton.  
27 ft. shies.  
Old and new timber, scales and weights, smiths' tools, winches, screwstocks, &c., wood rods and iron work from engine to Lawry's shaft, a superior miners' dial, ladders, frames and sheds, burning house, tin leavings, and other stores throughout the mine; account house furniture, &c.

To view, apply to Capt. POOLEY, on the mine, any day previous to the sale, from Ten to Five o'clock.  
For further information, apply to the Auctioneers, A. BERRYMAN, Penzance, A. T. HARTLEY, St. Ives.

## TO BE SOLD, BY AUCTION, at SOUTH FOWEY CONSOLS

MINE, near Par Station, Cornwall, on Thursday, the 2nd July, 1874, at Two o'clock in the afternoon, the undermentioned

## MINE MATERIALS, viz:—

ONE excellent 40 in. WATER-WHEEL, 5 ft. breast, iron axle, sockets, and rings, with 4 ft. crank attached, and 28 fms. of ½ in. launders; also, shaft bob, counter balance bob, logging bob, and about 29 fms. of 2½ in. iron flat rods, complete. All nearly as good as new.

1 6 armed CAPSTAN and SHEARS, with ½ capstan chain. Very good.

10 10 in. 4 ft. PUMPS.

11 11 in. 4 ft. do.

12 12 in. 4 ft. WORKINGS.

1 9 in. 11 ft. ditto.

1 8 in. 11 ft. ditto.

2 DOORPIECES—1 12 in., and 1 11 in.

1 12 in. WINDBORE, 9 ft. long; flat bottom.

1 10 in. ditto, 6 ft. long; ditto.

1 8 in. ditto, 9 ft. long; ditto.

About 28 fms. of 9 in. main rods, with rod plates and bolts to match; 2 pairs of hammered iron main caps, 13½ ft. long, by 6 in. wide; flange pins; staples and glands, iron star-ladders, &c.; 1 4 ft. iron tube, 30 ft. long; 2 26 in. iron tubes, each 16 ft. long.

Wood drying or changing house, containing 2 iron tables, 26 in. by 33 ft. long each, for drying the iron clothes.

Wood smiths' shop, containing 40 in. smiths' bellows, anvil, smiths' and miners' tools, and several tons of useful and strong iron.

Shaft and whim pulleys; and a quantity of useful timber, shaft, launders, and other materials.

For further particulars, apply to Capt. F. PUCKEY, St. Blazey; or the auctioneer, Mr. WILLIAM WERRY, St. Blazey, near Par Station.

## TO INVESTORS.

**TWO SPLENDID OPPORTUNITIES SUCH AS ARE SELDOM**

met with—the one, a COTTON SPINNING CONCERN, ready for

IMMEDIATE WORKING, and stocked with the most VALUABLE MACHINERY, principally new—the other, a LARGE IRONMONGERY BUSINESS,

at present and for the past 22 years in ACTIVE TRADE, and which has always

realised very large profits—ARE NOW OFFERING.

Both of these opportunities are now open for investment. Adventitious

investors, speculating with the object of receiving promotion money, will not be

admitted.

Those only who desire to secure a permanent income on a moderate investment

and apply personally, or address by letter—

Mr. HALLAS, PUBLIC ACCOUNTANT, 32, FAULKNER STREET,

MANCHESTER.

Who will furnish the fullest information, and to probable investors furnish letter

of introduction to view the properties.

## MACHINERY AND MINE MATERIALS.

**FOR SALE.**—

A 30 inch PUMPING ENGINE, with BOILER.

A 10 horse power PORTABLE ENGINE.

A 2½ horse power SEMI-PORTABLE ENGINE, on stand plate.

A WATER WHEEL, 32 feet high, 3 feet 4 inches breast, with

iron axle, centres, and ring.

A WINDING CAGE.

Apply to—

W. TREGAY, REDRUTH.

## PIT SINKING AND WINDING COAL.

**FOR SALE,** and ready for immediate delivery, a 14, 18, 25,

and 30 horse power PORTABLE STEAM ENGINES, with link motion,

Also, a 9 and 15 horse power VERTICAL ENGINES, with link motion reversing

gear, suitable for mining operations.

**FOR SALE.**—An excellent PORTABLE STEAM ENGINE; and a 7-ft. PAN

MORTAR MILL. Apply to—

BARROWS AND STEWART, ENGINEERS, BANBURY.

**ON SALE.**—MASSIVE CRUSHING MILL, with two pairs of

40 in. rolls, in cast metal frames.

Also, 250 yards of 1½ in. diameter IRON WIRE WINDING ROPE.

Address, "X. Y. Z.", MINING JOURNAL OFFICE, 26, Fleet-street, London.

In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Cornwall.

**IN the MATTER of the COMPANIES ACT, 1862, and of the**  
PERRAN CONSOLS TIN MINING COMPANY (LIMITED).—By an Order made by His Honor the Vice-Warden of the Stannaries, in the said Matter, dated the 24th day of June instant, on the petition of George Williams, Sir Frederick Martin Williams, Baronet, M.P., Michael Williams, Edward Williams, and Charles William Reynolds, carrying on business at Portreath, in the said Stannaries, as Co-partners and Merchants, under the style or firm of "Williams's Portreath Company," and also on the petition of Edward Michell, Richard Ferris Michell, and Ann Emily Millett, carrying on business at Truro, in the said Stannaries, as General Merchants, under the style or firm of "Robert Michell and Son," respectively claiming to be creditors of the said Mining Company, IT WAS ORDERED that the said PERRAN CONSOLS TIN MINING COMPANY (LIMITED) should be WOUND-UP by this Court under the provisions of the Companies Act, 1862.  
ROBERT MACLEANE PAUL, Truro.  
(Solicitor for the first-named Petitioners.)

Dated Truro, the 25th day of June, 1874.

In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Cornwall.

**IN the MATTER of the COMPANIES ACT, 1862, and of the**  
PERRAN CONSOLS TIN MINING COMPANY (LIMITED).—The Vice-Warden has, by an order made in the said Matter, bearing date the 24th day of June instant, appointed CHARLES WILLIAM CLINTON, of Truro, within the said Stannaries, an Officer of the said Court, to be the OFFICIAL LIQUIDATOR of the said company.  
FREDERICK MARSHALL, Registrar.  
Dated Registrar's Office, Truro, the 25th day of June, 1874.

In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Cornwall.

**IN the MATTER of the COMPANIES ACT, 1862, and of the**  
PERRAN CONSOLS TIN MINING COMPANY (LIMITED).—Notice is hereby given, that ALL CREDITORS of the ABOVE-NAMED COMPANY are required, on or before the 4th day of July next, to SEND IN their NAMES and ADDRESSES, and the AMOUNTS and PARTICULARS of their SEVERAL CLAIMS, to CHARLES WILLIAM CLINTON, the Official Liquidator of the said company, at the Stannaries Court Office, in Truro.  
FREDERICK MARSHALL, Registrar.  
Dated Registrar's Office, Truro, the 25th day of June, 1874.

In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Cornwall.

**IN the MATTER of the COMPANIES ACT, 1862, and of the**  
EAST NEW WHEEL LOVELL MINING COMPANY.—The Registrar of this Court has appointed Saturday, the 4th day of July next, at Eleven o'clock in the forenoon, at the Registrar's Office, in Truro, to SETTLE the LIST of CONTRIBUTORIES of the ABOVE-NAMED COMPANY, now made out and deposited at the said office.  
CHARLES WILLIAM CLINTON, Official Liquidator.  
Dated Stannaries Court Office, Truro, this 19th day of June, 1874.

WEDNESDAY, JULY 1st, 1874.

**VERY VALUABLE MINE MACHINERY AND MATERIALS FOR SALE,**  
AT NORTH ROSKEAR MINE, CAMBORNE, CORNWALL.

**MR. T. T. WHEAR, Auctioneer, Camborne, has been favoured**  
with instructions to SELL, BY PUBLIC AUCTION, on Wednesday, the 1st July, 1874, at Eleven o'clock in the forenoon, at North Roskear Mine, Camborne, the FOLLOWING VALUABLE

**MACHINERY AND MATERIALS thereon, comprising:—**

ONE 70 in. cylinder ENGINE, 10 ft. stroke in cylinder, and 8 ft. in shaft, with

metallic piston, and THREE 13 ton BOILERS.

ONE cast iron BALANCE BOB, at surface.

ONE 24 in. WINDING ENGINE, metallic piston, 6 ft. stroke, ONE 10 ton

BOILER, iron cage, &c.

ONE 24 in. WINDING ENGINE, 6 ft. stroke, 19 ft. fly-wheel, with wrought

iron axle, ONE 10 ton BOILER, and whim cage for wire rope.

ONE 16 in. ENGINE, 4 ft. stroke, with 2 fly-wheels, and ONE 8 ton BOILER,

iron cage, and gear for whim, and crusher attached.

1 shears, 60 ft. high.

1 ditto, 36 ft. high.

1 capstan, iron centre.

1 ditto, oak centre.

15 16 in. pumps.

6 12 in. ditto.

1 10 in. ditto.

27 8 in. ditto.

25 6 in. ditto.

1 16 in. pole case.

1 15 in. ditto.

1 16 in. H piece.

1 15 in. ditto.

1 16 in. top or piece.

1 15 in. ditto.

1 16 in. windbore.

1 15 in. ditto.

1 13 in. pole.

1 6 in. ditto.

1 14 in. stuffing box and glands.

1 13 in. ditto.

1 6 in. ditto.

1 pair 7 in. faggotted taper caps, 18 ft.

long.

5 pairs 7 in. faggotted rod plates.

5 pairs 7 in. ditto.

4 pairs 5½ in. rolled rod plates.

2 pairs 5 in. ditto.

100 pairs faggotted plates for 7 in. rods.

6 pairs 8 caps and loops.

Rod and flange bolts.

5 pieces 8 in. rods.

Several lots of timber, ladders, scales and weights, rings for 34 ft. wheel, carpenter's tools, augurs, &c., sundry iron, chains, and a large quantity of other materials; also, the account house furniture.

A branch of the West Cornwall Railway runs into the mine.

To view, apply to the Agents on the Mine; any further information may be obtained of the Auctioneer, Camborne.—Dated June 18th, 1874.

## GREAT WHEEL VOR UNITED MINES.

**MR. R. H. CADE has been favoured with instructions to**  
OFFER FOR SALE, BY PUBLIC AUCTION, on Tuesday, the 7th day of July next, commencing at Eleven o'clock A.M. precisely, at the Great Wheel Vor United Mines, in the parish of Breage, in the county of Cornwall, the under-mentioned valuable

**SPARE MACHINERY AND MATERIALS**

(not required by the company for present purposes), consisting of—

ONE 36 in. STAMPING ENGINE, double, with THREE BOILERS, 11 tons

each, two large fly-wheels, &c., complete.

FOUR 16 head STAMPS AXLES, with frames, heads, lifters, &c., complete.

ONE 30 in. MAN ENGINE, 12 ft. stroke, with ONE BOILER, 12 tons.

ONE 24 in. WHIM ENGINE, with ONE BOILER, 12 tons.

ONE powerful STEAM CAPSTAN.

ONE large SHEARS, at the 85 in. engine.

ONE large SHAFT TACKLE, with pulleys complete.

## PITWORK AT IVY'S SHAFT.

64 16 in. pumps.

58 14 in. ditto.

12 13 in. ditto.

10 11 in. ditto.

3 18 in. ditto.

1 17 in. ditto.

2 12 in. ditto.

2 19 in. ditto.

2 14 in. workings.

2 16 in. H pieces.

2 16 in. doorpiece.

2 16 in. ditto.

1 16 in. windbore.

1 18 in. pole case, stuffing box and gland.

1 iron landing wagon, a quantity of rod and flange bolts, staples and glands, 20 pieces 13 and 14 in. pitch pine main rods, long lengths.

3 9 in. pumps; 1 10 in. windbore; 1 9 in. doorpiece; 1 8 in. working, 14 ft. long; 1 9 in. matco, commencing at Eleven o'clock A.M. precisely, at the Great Wheel Vor United Mines, in the parish of Breage, in the county of Cornwall, the under-mentioned valuable

1 large balance bob; a quantity of faggotted and rolled strapping plates; 2 iron

skips; 1 iron landing wagon.

## AT EDWARD'S SHAFT.

46 13 in. pumps, 22 pairs faggotted strapping plates, 1 13 in. pole, stuffing box

and gland, 20 2 ft. rod rolls, 4 9 in. pumps, 1 8 in. working, 1 8 in. doorpiece, a lot

of bucket rods, &c.

3 smiths' bellows, vice, anvils, smiths' and miners' tools, a quantity of new and

old iron.

ON DRESSING FLOORS.

Several large sheds, dressing machinery, &c., also a quantity of new and old

timber.

The above machinery and materials will be found equal to the best in the county

of Cornwall, and will be sold in lots to suit the convenience of purchasers.

For further particulars, apply to J. J. THURAN, Esq., Gresham House, Old

Broad-street, London; the Agents on the Mines; or Mr. R. H. CADE, Auctioneer,

Helston.—Helston, 17th June, 1874.

**FOR SALE.**—An excellent 60-horse high-pressure HORIZONTAL

STEAM ENGINE (30 in. cylinder 5 ft. stroke, with TWO spherical-ended

cylindrical BOILERS, 42 ft. long and 5 ft. diameter. Also TWO SETS of 18 in.

PIT PUMPS, about 200 ft. long each, with double bell crank connecting rod, and

spears and gear complete. An 11 in. double-action force-pump is attached to the

engine, which can be detached or otherwise.

Application to be made to THOMAS HAWKLEY, Esq., C.E., 30, Great George-

street, Westminster; or to Mr. LOAM, at the Waterworks Office, Nottingham.

SAMUEL MAPLES, Clerk to the Company.

N.B.—The articles above mentioned have been used for sinking a large shaft, and

are peculiarly well adapted for colliery and other mining purposes.

## FLINTSHIRE.

**THE REMAINING PORTION OF THE CILCEAN HALL ESTATE, comprising**  
VALUABLE AND IMPORTANT FREEHOLD MINERAL PROPERTIES,  
QUARRIES, AND FARM LANDS.

**MESSRS. HARDS, VAUGHAN, AND JENKINSON WILL**  
SELL, BY AUCTION, at the Mart, London, on Wednesday, July 8th, at  
Two o'clock, a valuable and important

## FREEHOLD ESTATE.

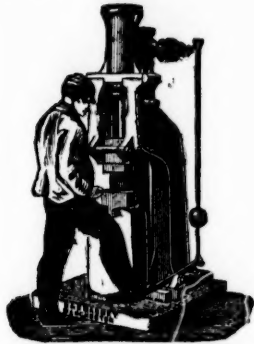
Comprising a fertile FARM, known as HENDRE FIGILLT, situate in the parish of Halkin, in the county of Flint, comprising about 200 acres, a portion of which is let at £175 per annum; also all those large and important MINERAL PROPERTIES, known as the GREAT HENDRE LEAD MINE, the NORTH



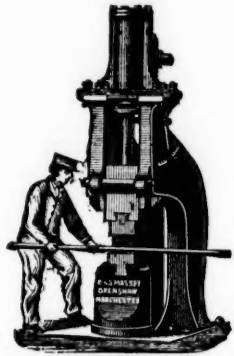
# B. & S. MASSEY, OPENSHAW, MANCHESTER.

PRIZE MEDALS AWARDED:—Paris, 1867; Havre, 1868; Highland Society, 1870; Liverpool, 1871; Moscow, 1872; Vienna, 1873.

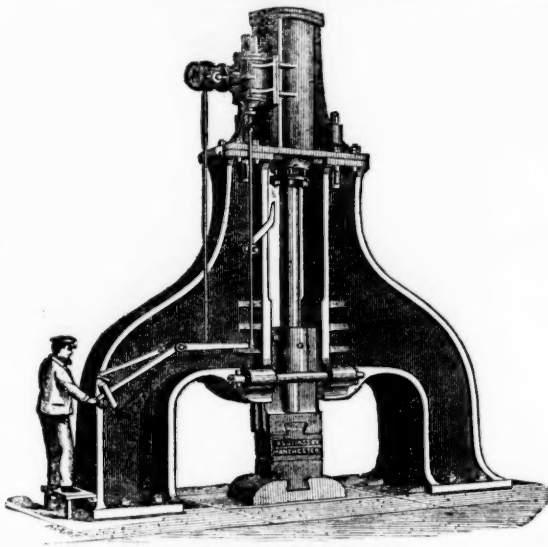
Patentees and Makers of Double and Single-acting STEAM HAMMERS of all sizes, from  $\frac{1}{2}$  cwt. to 20 tons, with self-acting or hand motions, in either case giving a perfectly DEAD BLOW, while the former may be worked by hand when desired. Large Hammers, with Improved Framing, in Cast or Wrought Iron. Small Hammers, working up to 500 blows per minute, in some cases being worked by the Foot of the Smith, and not requiring any separate Driver.



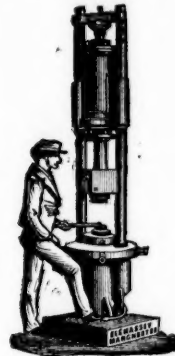
Small Hammer with Foot Motion.



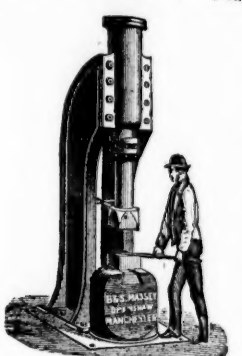
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Steam Hammer for Heavy Forging.



Special Steam Stamp.

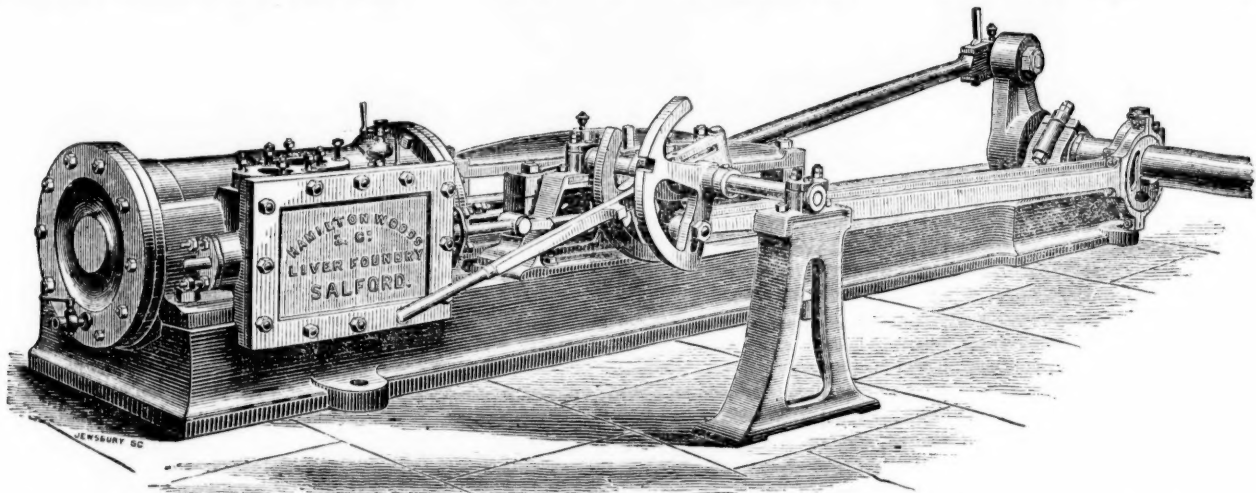


General Smithy Hammer.

From 60 to 100 Steam Hammers and Steam Stamps may usually be seen in construction at the Works.

SPECIAL STEAM STAMPS, of great importance for Forging, Stamping, Punching, Bolt-making, Bending, &c. STEAM HAMMERS for Engineers, Machinists, Ship-builders, Steel Tilters, Millwrights, Coppersmiths, Railway Carriage and Wagon Builders, Colliery Proprietors, Ship Smiths, Bolt Makers, Cutlers, File Makers, Spindle and Flyer Makers, Spade Makers, Locomotive and other Wheel Makers, &c.; also for Use in Repairing Smithies of Mills and Works of all kinds; for straightening Bars, bending Cranks, breaking Pig-iron, &c.

## HAMILTON WOODS AND CO.,



Makers of Hauling & Winding Engines, Direct Cut-off Expansion Engines, & Compound Engines. High-pressure Engines, Vertical and Horizontal, from 3 to 20 h.p.

ALWAYS IN STOCK, OR IN PROGRESS.

LIVER FOUNDRY, ORDSALL LANE, SALFORD, MANCHESTER.

IN THE SUMMER HOLIDAYS.  
PRACTICAL GEOLOGY.  
SIX ELEMENTARY LECTURES  
Will be given by PROF. TENNANT, at his residence,  
149, STRAND, W.C.

The Lectures delivered on the subject of Geology are intended to have especial reference to the important practical applications of that science to Engineering, Mining, Architecture, and Agriculture. The Granites, Syenites, Porphyries, Greenstones, Clays, &c., will be described, and the minerals peculiar to each noticed. The application of Geology to pursuits connected with Mining Operations for Coal, Iron, Copper, Tin, Silver, Gold, Mercury, Antimony, Zinc, Cobalt, &c., will be specially considered. The Student is directed how to proceed in examining a new country, to collect and record his observations, and mark his specimens, in order to render them useful to more experienced geologists at home. In order more fully to exemplify the applications of the Science, Mr. TENNANT accompanies his Classes to various Museums in London, including the Museum of Practical Geology and the British Museum; also, in Excursions into the Country, in which the actual field work of the Geologist is explained and illustrated.

MR. TENNANT, 149, STRAND, LONDON, W.C., has FOR SALE some VALUABLE and CHOICE COLLECTIONS of MINERALS, &c.:

I.—A Collection of about 2000 MINERALS and ROCKS, with Models of Crystals, Diagrams, &c., in a painted deal Cabinet with 55 drawers and glass case on top, 9 ft. 5 in. long, 5 ft. 2 in. high, and 21 in. from back to front, removed from the Royal Military College, Woolwich. The Collection is well adapted for illustrating thirty to forty Lectures on MINERALOGY and GEOLOGY.

II.—CABINET with 60 drawers, containing 2600 species of Fossils, represented by 4500 specimens, stratigraphically arranged. This Collection, with the Collection of Minerals No. I., would form an instructive Geological Museum for a nobleman or country gentleman.

III.—TWO CABINETS, each containing 30 drawers, with upwards of 2500 Minerals, Rocks and Fossils. This collection is well adapted for a first-class Educational Establishment.

IV.—FIRST-CLASS GEOLOGICAL COLLECTION OF TWO CABINETS, each measuring 9 ft. 3 in. long, 2 ft. 4 in. wide, and 3 ft. 10 in. high; each containing 45 drawers, with a glass case on the top of each cabinet, 4 ft. 11 in. high, and 15 in. from back to front. One Cabinet is filled with 2600 Minerals and Rocks, the other with 2400 Fossils, British and Foreign, stratigraphically arranged.

The Collection is carefully named, and consists of 6000 specimens, many very choice, and selected principally from the Duke of Buckingham's (Stowe) sale, Marchioness of Hastings, Sir John St. Aubyn's, Drs. Buckland, Bowerbank, Mantell, and other celebrated collections. The first Gold Nugget received from Australia and a Gold Nugget from Ashantee, weight 6 oz., is in the collection; also a fine series of Diamonds, illustrating crystalline form and colour, from India, Brazil, South Africa, and Australia.

Any person wishing to become practically acquainted with the interesting and important study of Mineralogy and Geology will find this a good opportunity to obtain an instructive and valuable Geological Museum, scientifically arranged, the specimens having been collected with care and at great expense during the last 35 years. Price £5000.

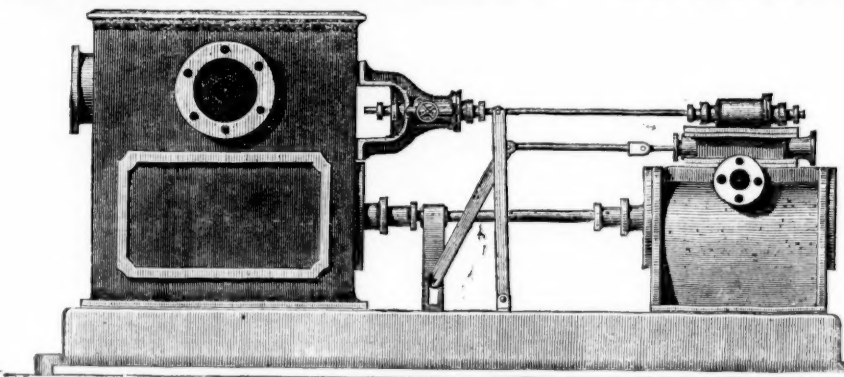
V.—MAHOGANY CABINET with 28 drawers, containing upwards of 1000 specimens of Minerals, Rocks, and Fossils in good condition and recently arranged. Price 150 guineas.

VI.—Mr. TENNANT expects shortly to have ready for sale a choice and extensive collection of RECENT SHELLS, MINERALS, ROCKS, and FOSSILS, in a large and well-made Cabinet of 108 drawers, with glass Bookcase on the top. The Cabinet was the property of the late Mrs. Mawe, and contains her private collection of Recent Shells and Minerals. Amongst the latter are some Crystals of Gold, figured in Mawe's Travels in Brazil, and supposed to be unique. The Bookcase contains many of the recent works on Geology by Buckland, Lyell, Mantell, Murchison, Phillips, and others, and 26 Volumes of the publication of the Palaeontographical Society, &c.

JAMES TENNANT, Mineralogist (by appointment) to Her Majesty, June, 1874. 149, STRAND, LONDON, W.C.

MINING PROSPECTUSES AND ANNOUNCEMENTS OF PUBLIC COMPANIES should be inserted in the BARNSTAPLE TIMES, published every Tuesday, and in the DEVON POST, published every Saturday, as these papers circulate largely throughout Devon and Cornwall, where many thousands of investors reside. Legal and Public Companies' advertisements, 6s. a line each insertion; Trade and Auctions, 4d. a line; Wanted, &c., 20 words, 1s. Published by J. B. JONES, Bouthport-street, Barnstaple, Devon to whom all orders, by post or telegraph should be sent.

## HATHORN, DAVIS, CAMPBELL, AND DAVEY, SUN FOUNDRY, LEEDS, MAKERS OF THE PATENT SEPARATE CONDENSER.



Also Compound and Single-cylinder DIFFERENTIAL EXPANSIVE and CONDENSING PUMPING ENGINES—DAVEY'S PATENT. Steam Pumps of various kinds. Hydraulic Pumps for dip workings. Winding Engines. Compound Rotative Engines. High and Low-pressure Steam Boilers, &c.

FURTHER PARTICULARS ON APPLICATION.

## CHARLES PRICE AND CO'S PATENT RANGOON ENGINE OIL.

THIS OIL is suitable to every kind of Machinery; it is used almost exclusively in Her Majesty's Dockyards and Fleet, and by the War Office and East India Government; as well as by the Royal Mail Steam Packet Co., Pacific Steam Navigation Co., P. and O. Co., Cunard Co., and by most of the other important Royal Mail Steam Fleets in the kingdom. It is also extensively employed on the various railways, and by many of the leading engineering and manufacturing firms at home and abroad.

"I hereby certify that the Rangoon Engine Oil, manufactured by Messrs. Chas. Price and Co., is free from any material which can produce corrosion of the metal work of machinery. It is calculated, indeed, to protect metallic surfaces from oxidation, and, from its peculiar character, is not liable to lead to spontaneous combustion of cotton waste or any similar material which might become imbedded with it, as is the case with Rape, Gallipoli, and Olive Oils. The lubricating power of this oil is equal to Spermaceti or Lard Oil."

Extract from Mr. BAXTER'S Speech in the House of Commons, May 31st, 1870:—  
Chas. Price and Co.'s Rangoon Oil—"a vastly superior article" (speaking of Gallipoli Oil at £73 per ton)—"was obtained for from £40 to £45 per ton." Every parcel of the Oil sent from the Works bears the Trade Mark of the Firm, and as many spurious imitations of the Rangoon Engine Oil are sold purchasers are requested to observe that none is genuine which does not bear this mark.  
Oil, Tallow, and Colour Merchants, Seed Crushers, Turpentine Distillers, &c.  
London: CASTLE BAYNARD, UPPER THAMES STREET, & MILLWALL, POPLAR.—Works: ERITH, KENT.



## THE "CRANSTON" ROCK DRILL.

J. G. CRANSTON begs to announce that he is now prepared to supply the above machine. The "CRANSTON" ROCK DRILL is already in successful operation in several Mines in the North of England. STEAM BOILERS, AIR COMPRESSORS, and all other MINING MACHINERY supplied. For prices, estimates, and other particulars, apply to—

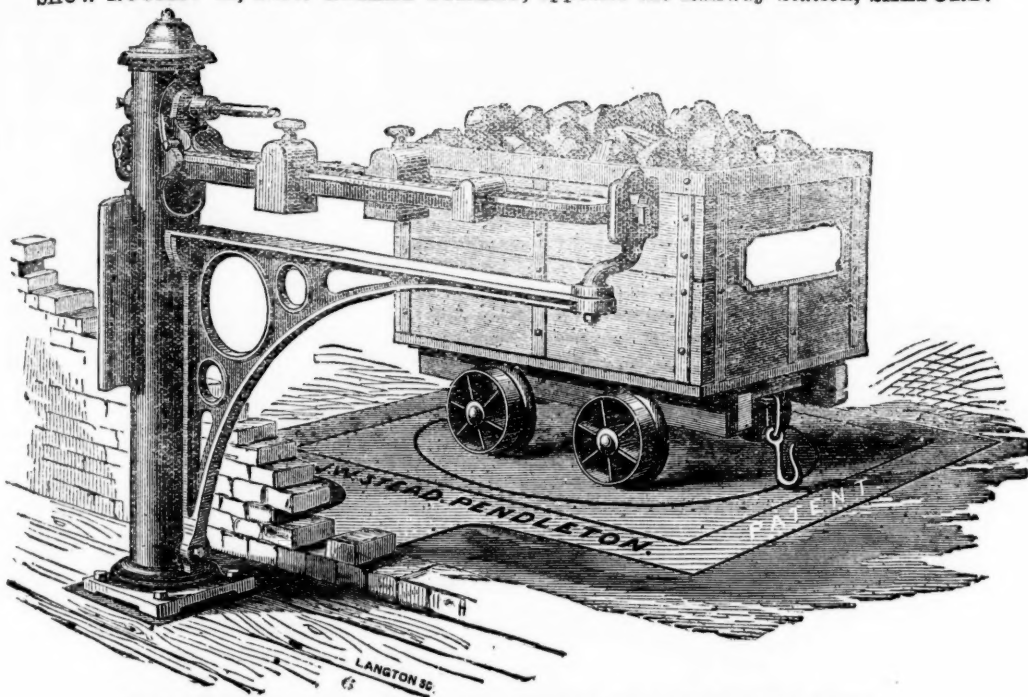
**J. G. CRANSTON, ENGINEER, 22, GREY STREET, NEWCASTLE-ON-TYNE.**

## J. W. STEAD,

(Late of the Firm of HODGSON and STEAD),

MANUFACTURER OF WEIGHING MACHINES, WEIGHBRIDGES, AND ALL DESCRIPTIONS OF WEIGHING PLANT FOR ALL NATIONS.

GLOBE FOUNDRY, PENDLETON, MANCHESTER.  
SHOW ROOMS:—11, NEW BAILEY STREET, opposite the Railway Station, SALFORD.



NEW PATENT WEIGHING MACHINES, specially for Mining Uses.

Globe Foundry is One Minute's Walk from the Pendleton Bus Office, and Four Minutes' from Pendleton Railway Station.

## BARROWS & STEWART, ENGINEERS, BANBURY,

MANUFACTURE

**PORTABLE STEAM ENGINES**  
With Gear for Winding, Pumping, and Ore  
Crushing.

Also, COMBINED MILLS and ENGINES, with

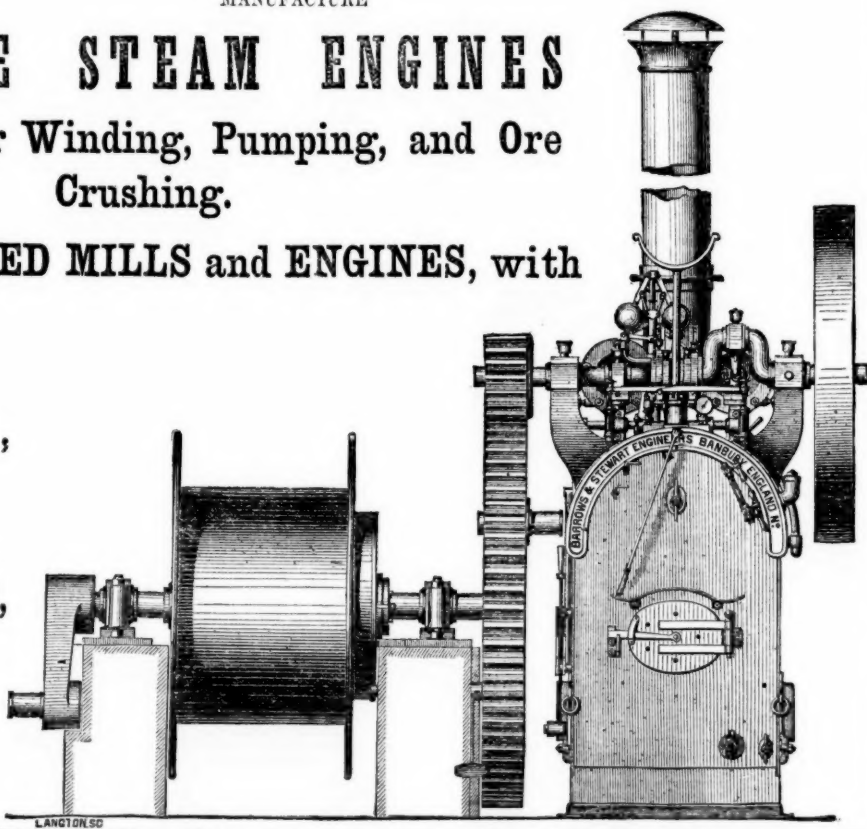
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**BOILERS,**

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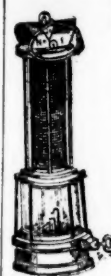
Cinders, Sand,

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**THOMAS WARDEN & SON,  
IRON, STEEL, AND GENERAL MERCHANTS,  
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Manufacturers of Anvils, Vices, Hammers, Bellows, Tug Irons, Hydraulic and Screw Jacks, Crabs, Cranes, Spades, Shovels, Picks, Arms and Boxes, Axles, Springs, Hurdles and Fencing, Screw Bolts, Washers, Hames, Chains, Files, Nails, &c., &c.  
SECOND-HAND RAILS, AND EVERY DESCRIPTION OF RAILWAY, COLLIERY, AND CONTRACTORS PLANT  
ALWAYS ON HAND.



## MINERS' LAMP

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Established Half-a-century.

**JOSH. COOKE AND CO. SAFETY LAMPS**

MADE TO DRAWING, DESCRIPTION, or MODEL. Illustrated  
Price Lists free, by post or otherwise.

VALUABLE TESTIMONIALS FROM EMINENT FIRMS.

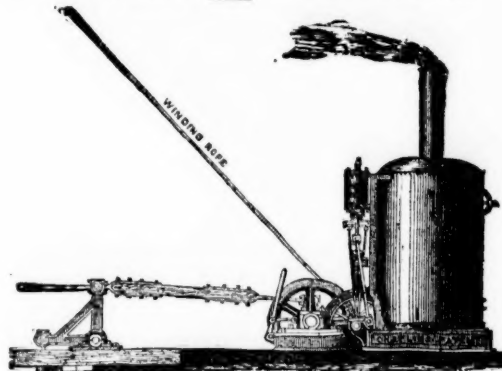
**MIDLAND DAVY LAMP WORKS,**

20, &c., LOWER LAWLEY STREET,

**BIRMINGHAM.**

Specimens may be seen at the INTERNATIONAL EXHIBITION, Kensington  
Gore, CLASS XIV., DIVISION 3, No. 6905.

Prize Medal—International Exhibition, 1862.



## CHAPLIN'S PATENT PORTABLE STEAM ENGINE

FOR PUMPING AND WINDING.  
SPECIALLY ADAPTED for PITS, QUARRIES, &c.  
SIMPLE and STRONG; require NO FOUNDATION or CHIMNEY STALK, and are  
EASILY ERECTED or REMOVED.

Sizes, from 2 to 30-horse power, with or without gearing.

Stationary Engines, 1 to 30-horse power, with or without jib.

Steam Cranes, 30 cwt. to 20 tons, for wharf or rail.

Hoisting Engines, 2 to 30-horse power, with or without jib.

Contractors' Locomotives, 6 to 27-horse power.

Traction Engines, 6 to 27-horse power.

Ships' Engines, for winding, cooking, and distilling, passed by H.M. Government for half water.

Steam Winches. Engines and Boilers for light screw and paddle steamers.

**WIMSHURST, HOLLIICK, & CO.,**

ENGINEERS,  
WORKS: REGENT'S PLACE, COMMERCIAL ROAD  
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(At Regent's Canal, near Stepney Station.)  
City Office: 34, Walbrook, Cannon-street, E.C.

**BENNETTS' SAFETY FUSE WORKS,**  
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**BLASTING FUSE FOR MINING AND ENGINEERING PURPOSES,**

Suitable for wet or dry ground, and effective in tropical or Polar Climates.

W. BENNETTS, having had many years experience as chief engineer with Messrs. Bickford, Smith, and Co., is now enabled to offer Fuses of every variety of his own manufacture, of best quality, and at moderate prices.

Price Lists and Sample Cards may be had on application at the above address.

LONDON OFFICE.—H. HUGHES, Esq., 85, GRACECHURCH STREET.

**THE PATENT SELF-ACTING MINERAL DRESSING MACHINE COMPANY (LIMITED).**

T. CURRIE GREGORY, C.E., F.G.S.  
OFFICES.—62, ST. VINCENT STREET, GLASGOW.

IMPORTANT NOTICE TO MINING PROPRIETORS.

This company grant licenses, under their patents, for the use, singly or in combination, of the most approved machinery for dressing ores, comprising Stamps, Jiggers, Classifiers, and Buddles.

MR. GEORGE GREEN, Mechanical Engineer to the above Company, SUPPLIES MACHINES under the above Company's Patents for DRESSING all METALLIC ORES. Dressing-floors having these Machines possess the following advantages:—

- 1.—They are cheaper than any other kind in first outlay.
- 2.—From 60 to 70 per cent. of the labour is saved.
- 3.—Only about one-fourth of the space usually occupied by dressing-floors is required.
- 4.—The ore is made clean at one operation, and 5 per cent. of ores otherwise lost is saved.

Drawings, specifications, and estimates will be forwarded on application to—  
GEORGE GREEN, M.E., ABERYSTWYTH, SOUTH WALES.

EXTRACTS FROM TESTIMONIALS RECEIVED:—

Mr. C. E. BAINBRIDGE, of the London Company's Mines, Middleton-in-Teesdale, by Darlington, writing on the 27th September, 1873, says:—"After a full season's experience of the very complete Dressing Machine erected by you at our Colberry Mines, we are fully satisfied with our decision to adopt your patents in preference to all others. The machinery does its work as well as we can desire, and better than we anticipated. We are now getting through 70 tons of ore stuff per day, of rich quality. Without your machinery we should have been at a stand still, for we cannot get hands to supply our wants elsewhere. It saves fully one-half of the old wages, and vastly more on the wages we now give, and the saving in ore is not much short of 10 per cent. You can quote from this letter as you think proper."

Mr. COULTAS DODSWORTH, of Haydon Bridge, writes, on the 15th January, 1874:—"I have just returned from the Stonecroft and Greyside Mines, where I have seen your 'Patent Ore Dressing Machinery' at work, with which I must say I was highly pleased. It is decidedly the best machinery I have ever seen for the purpose, the results being as near perfection as possible, and I am quite sure its use in this case will be a very great saving to the company. No large mining establishment should be without your machinery, especially when labour is difficult to procure—a mere fraction of the hands being only required as against the old system, and the work altogether much better done, and a great saving of ore effected. I have heard it said that your machinery is better adapted for poor than for rich ores, but from what I have seen to-day I am quite confident it will do for any kind of ores. I beg not only to congratulate, but also to compliment, you on the great success of your 'Patent Ore Dressing Machinery.' You may use this letter as you think proper."

Mr. MONTAGUE BEALE, Managing Director of the Cagliari Mining Company (Limited), says, on May 15th, 1873:—"I have much pleasure in speaking of the great efficiency of your 'Patent Dressing Machinery,' as erected by you at our mines at Rosas, in the Island of Sardinia. You will remember it has always been considered impossible to dress, or rather separate, the minerals our ores contain by machinery, but our captain assures me he gets a constant return of 76 per cent. of lead with the greatest ease, and I know by the returns we are realising the best market price. I consider this company is much indebted to you for the success you have achieved at so small cost. It may interest you to know, from my experience in several of the British possessions, including the whole of the Australian Colonies, that my opinion is I have never seen any dressing machinery that can efficiently, and at so small a cost, dress, and separate metallic ores, however close the mechanical mixture may be, as yours. You can use this letter in any way you like."

The most satisfactory testimonials also have been received from the GREENSIDE MINE COMPANY, Westmoreland; the TALARGOCH MINING COMPANY, North Wales, and others. Copies of these may be had from Mr. GREEN.

**THE NEWCASTLE DAILY CHRONICLE**

(ESTABLISHED 1764.)  
THE DAILY CHRONICLE AND NORTHERN COUNTIES ADVERTISER  
Offices, Westgate-road, Newcastle-upon-Tyne; 50, Howard street, North Shields; 165, High-street, Sunderland.

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## THE MINING SHARE LIST.

## BRITISH DIVIDEND MINES.

Shares.	Mines.	Prd.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid
1500	Alderley Edge, c, Cheshire*	10 00	—	—	13 1 8	0 5 0	Apr. 1874
20000	All-y-Crib, l, Talybont*	2 00	—	—	0 6 0	0 6 0	Feb. 1873
30000	Bampfylde, c, l, Devon*	1 00	5 1/2	5 1/2	0 2 0	0 2 0	June 1873
18000	Blaen Caelan, s, l, Cardigan* (24 sh.)	3 10 0	—	—	0 10 9	—	—
200	Botalack, t, c, St. Just*	116 5 0	—	—	619 15 0	5 0 0	Oct. 1871
4000	Brookwood, c, Buckfastleigh	1 10 0	—	—	110 0 0	2 0 0	Jan. 1872
2348	Cargoll, s, l, Newlyn	5 0 5	2	1 1/2	4 16 3	0 12 6	Oct. 1872
6400	Cashwell, l, Cumberland*	2 10 0	—	—	1 4 0	0 4 0	Aug. 1872
7500	Castle-an-Dinas, t, St. Columb*	2 0 0	—	—	0 10 0	0 2 0	July 1873
1000	Curn Brea, c, t, Illogan*	35 0 0	70	67 1/2	308 0 0	1 0 0	Feb. 1874
6000	Cuth, & J. Penrhynendrach	5 0 0	—	—	0 7 6	0 7 6	June 1873
2450	Cook's Kitchen, t, Illogan*	20 4 9	9 1/2	10 10 1/2	11 17 0	0 7 6	Jan. 1873
10240	Devon Gt. Consols, c, Tavistock*	0 12 0	—	—	116 10 0	0 12 0	May 1874
4296	Dolcoath, c, l, Camborne	10 14 10	47 1/2	45 50	104 4 2	0 12 6	Jan. 1874
10000	East Boleward, t, Sancreed*	1 0 0	—	—	0 2 11	0 5 0	Feb. 1874
6144	East Caradon, c, St. Cleer*	2 14 6	1	3 1	14 19 0	0 2 0	Oct. 1872
300	East Darren, l, Cardiganshire	32 0 0	—	—	232 10 0	1 0 0	May 1874
6400	East Pool, t, c, Illogan*	0 9 9	10 1/2	9 1/2	13 11 3	0 2 6	May 1873
6000	Exmouth, t, c, Chistow	0 7 6	—	—	0 1 0	0 1 0	May 1873
3800	Foxdale, l, Isle of Man*	25 0 0	—	—	80 15 0	0 10 0	Sept. 1872
40000	Glasgow Carr, c* (30,000 £1 p., 10,000 15s. p.)	4 0 0	12	11 1/2	0 4 10	0 10 0	Sept. 1873
15000	Great Laxey, l, Isle of Man*	4 0 0	—	—	16 17 0	0 6 0	Apr. 1874
35000	Great West Van, l, Cardigan*	2 0 0	—	—	0 1 0	0 1 0	Sept. 1873
6008	Great Wreth Vor, t, c, Helston*	40 15 0	3 1/2	3 1/2	15 19 6	0 2 6	June 1872
6400	Great Hurl, l, Durham	0 6 0	—	—	1 8 0	0 4 0	May 1874
1024	Herodford, near Liskeard*	5 10 0	4 1/2	4 1/2	62 5 0	0 15 0	Oct. 1872
18000	Hillingdon, c, Calstock* (21 sh.)	1 0 0	1 1/2	1 1/2	4 3 0	0 5 0	Dec. 1872
35000	Killaloe, s, l, Tipperary	1 0 0	—	—	0 3 11 1/2	0 6 0	Mar. 1873
400	Lisburne, l, Cardiganshire	18 15 0	—	—	663 10 0	1 0 0	May 1874
5120	Lovell, t, Wendron	0 10 0	—	—	0 17 6	0 1 0	Jan. 1874
9000	Minera Mining Co., l, Wrexham*	5 0 0	25	20 25	63 11 8	0 2 0	May 1874
30000	Mining Co. of Ireland, cl, c, l*	7 0 0	6 1/2	5 1/2	0 8 0	0 6 0	July 1872
12000	North Hendre, l, Wales	2 10 0	—	—	0 15 0	0 2 6	June 1873
2000	North Levant, t, c, St. Just	11 9 6	5	4 1/2	4 13 0	0 12 6	Sept. 1873
7000	Old Treburget, s, l, ordinary shares	1 0 0	—	—	0 9 0	0 9 0	Oct. 1872
6000	Old Treburget, s, l, 10 per cent. pref.	0 10 0	—	—	0 10 0	0 10 0	Oct. 1872
5694	Pedn-ar-dra, t, Redruth	0 10 0	—	—	0 10 0	0 10 0	Nov. 1871
6000	Penhalls, t, St. Agnes	3 0 0	2 1/2	2 3/4	3 3 0	0 2 0	Jan. 1874
6000	Penstruthal, t, c, Gwennap*	2 0 0	—	—	0 1 0	0 1 0	Nov. 1873
6000	Phenix, t, c, Linkinhorne	4 13 4	3 1/2	5 3/4	39 19 0	0 4 0	Nov. 1872
1772	Polberro, t, St. Agnes	15 0 0	—	—	1 12 6	0 5 0	Mar. 1872
18000	Prince Patrick, s, l, Holywell	1 0 0	—	—	0 7 0	0 2 0	July 1874
1120	Providence, l, Lelant (last call June 74)	16 16 7	3 1/2	5 5 1/2	104 12 6	0 10 0	Sept. 1872
3000	Roman Gravel, l, Salop*	7 10 0	10 1/2	15 1/2	3 13 6	0 8 0	Apr. 1872
10000	Rhett, cl, t, St. Austell*	1 0 0	—	—	0 1 0	0 1 0	Feb. 1872
6000	Rimford Dressing, t, Calstock*	1 0 0	—	—	0 1 0	0 1 0	Jan. 1872
612	South Caradon, c, St. Cleer*	1 0 0	65	60 80	713 0 0	0 10 0	Apr. 1874
10000	South Carn Brea, t, l, Illogan*	17 6	3 1/2	3 1/2	0 10 0	0 8 0	July 1872
6000	South Darren, l, Cardigan*	3 6 6	—	—	1 18 0	0 16 0	Nov. 1870
8771	St. Just Amalgamated, t*	3 10 0	—	—	0 9 0	0 4 0	Nov. 1871
12000	Tankerville, l, Salop*	6 0 0	9	8 1/2	3 8 0	0 6 0	Feb. 1873
20000	Terras, t, St. Austell*	1 0 0	—	—	0 3 0	0 1 0	Oct. 1872
6000	Tinroft, c, t, Pool, Illogan*	9 0 0	24	32 3	47 3 0	0 5 0	May 1874
1000	Trumpet Consols, t, Helston	6 5 0	—	—	9 11 0	0 10 0	Nov. 1872
18000	Van, l, Llanidloes*	4 5 0	30	25 27 1/2	12 9 6	0 12 6	Apr. 1874
15000	W. Chiverton, l, Perranzabuloe	10 0 0	—	—	62 10 0	0 9 0	Jan. 1873
2046	West Wheal Frances, t, Illogan	27 3	13 1/2	13 1/2	638 10 0	1 10 0	Aug. 1872
612	Wheal Basset, c, Illogan*	2 6	27 1/2	25 27 1/2	11 14 6	0 3 0	May 1874
4286	Wheal Kitty, t, St. Agnes	6 4 6	9	8 1/2	82 2 3	0 10 0	May 1872
806	Wheal Margaret, t, Uny Lelant	15 17 6	1 1/2	1 1/2	0 1 0	0 1 0	Jan. 1873
10000	Wheal Mary, t, St. Dennis*	5 0 0	—	—	0 2 0	0 4 0	Aug. 1872
80	Wheal Owles, t, St. Just	70 0 0	130	125 130	0 2 0	0 9 0	Mar. 1874
12000	Wheal Russell, c, Tavistock	1 0 0	—	—	0 1 0	0 1 0	Jan. 1873
16000	Wheal Tregoss, t, Roche	1 0 0	—	—	0 1 0	0 1 0	Jan. 1873
10000	Wheal Whisper, t, c, Warleggan*	1 0 0	—	—	0 1 0	0 1 0	May 1873
25000	Wicklow, c, s, l, Wicklow	2 10 0	3 1/2	3 1/2	52 9 0	0 2 6	Mar. 1872

## FOREIGN DIVIDEND MINES.

Shares.	Mines.	Prd.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid
85500	Alamillos, Spain*	2 0 0	2	1 1/2	1 3 9	0 2 0	Mar. 1874
30000	Almaden, t, l, Spain*	1 0 0	—	—	0 4 3	0 2 0	May 1873
20000	Australian, c, South Australia*	7 7 6	1 1/2	1 1/2	0 11 8	0 2 0	July 1873
10000	Battle Mountain, c, (6240 part pd.)	5 0 0	—	—	0 10 0	0 10 0	Nov. 1872
15000	Birdseye Creek, c, California*	4 0 0	3 1/2	3 1/2	0 14 0	0 2 6	June 1874
6000	Bensberg, l, Germany*	10 0 0	—	—	0 17 4	0 8 0	July 1873
12320	Bura, c, l, So. Australia*	5 0 0	—	—	56 0 0	0 10 0	Oct. 1872
20000	Cape Copper Mining, t, So. Africa*	7 0 0	29 1/2	28 1/2	16 15 0	1 0 0	June 1874
40000	Cedar Creek, c, California*	5 0 0	2 1/2	2 1/2	0 5 0	0 2 6	June 1873
80000	Central American Association*	0 15 0	—	—	0 16 0	0 1 0	July 1869
15000	Chicago, s, Utah*	5 0 0	—	—	0 8 0	0 2 0	Oct. 1871
21000	Colorado Fuel, t, l, Colorado*	5 0 0	4 1/2	4 1/2	2 5 0	0 2 0	Mar. 1872
78162	Don Pedro North of the River*	0 16 0	—	—	1 0 0	1 0 0	July 1871
23500	Eberhardt and Aurora, s, Nevada*	10 0 0	3 1/2	2 1/2	2 5 0	0 15 0	June 1873
2352	Eldorado, c, Nova Scotia*	10 0 0	—	—	3 12 0	0 6 0	Dec. 1872
60000	Emma, s, g, t, Utah (25,000 fully pd.)	20 0 0	2 1/2	2 1/2	2 7 3	0 2 6	Mar. 1873
70000	English and Australian, t, l, Aust.	2 10 0	1 1/2	1 1/2	0 3 0	0 3 0	April 1872
15000	Ferguson, c, California*	2 0 0	—	—	4 2 0	0 5 0	July 1873
80000	Flagstaff, s, Utah*	10 0 0	3 1/2	3 1/2	4 4 0	0 5 0	Mar. 1874
25000	Fortuna, l, Spain*	2 0 0	4 1/2	4 1/2	0 2 0	0 5 0	Mar. 1874
30000	Gold Run, s, l, Idaho*	1 0 0	—	—	0 2 0	0 5 0	June 1872
40000	Kapua Mining, t, l, Australia*	1 0 0	—	—	0 14 0	0 2 0	July 1873
30000	Last Chance, s, l, Utah*	5 0 0	1 1/2	1 1/2	14 10 0	0 7 6	Mar. 1874
15000	Linares, l, Spain*	3 0 0	3 1/2	3 1/2	1 11 6	0 16 0	Mar. 1873
7837	Luisitana, Portugal* (25 shares)	3 0 0	1 1/2	1 1/2	0 5 0	0 5 0	Dec. 1872
15000	Mammoth Copperopolis of Utah, c, s	10 0 0	—	—	0 4 0	0 4 0	Jan. 1873
5000	Mountain Chief, s, Utah*	10 0 0	—	—	0 6 0	0 3 0	Jan. 1873
18000	Musson Mining & Ironworks, cl, l	30 0 0	—	—	15 16 8	0 19 9	June 1874
10000	Pontigault, s, l, France*	20 0 0	22	20 22	1 8 0	0 1 0	Jan. 1872
10000	Port Phillip, c, l, Clunes*	1 0 0	—	—	1 8 0	0 1 0	Jan. 1872
40000	Richmond Consols, t, l, Victoria*	5 0 0	7	6 1/2	15 per cent.	—	—
120000	Scottish Australian Mining Co. t*	5 0 0	—	—	1 8 0	0 2 0	Dec. 1873
112500	Sierra Buttes, c, California*	2 0 0	2 1/2	2 1/2	0 16 0	0 2 0	Nov. 1873
80000	South Aurora, s, Nevada*	8 0 0	—	—	2 12 0	0 4 0	June 1874
15000	Sweetland Creek, c, California*	4 0 0	4 1/2	4 1/2	0 11 6	0 6 6	May 1874
20000	Tollima, c, s* (6000 sh. are £5 f. pd.)	4 0 0	—	—	54 0 0	0 20 0	Dec. 1873
400	Westphalian, s, l, c, Prussia*	20 0 0	—	—	0 3 7	0 1 9	Jan. 1874
15000	Western Andes, s* (8000 £5 f. pd.)	3 10 0	3 1/2	3 1/2	—	—	—

## NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Prd.	Last Pr.	Clos. Pr.	Last Call.
20000	Anglo-Australian, c, Victoria*	2 10 0	—	—	Sept. 1872
20000	Australian United, c, Victoria*†	2 10 0	1½	1½ 1½	Fully pd.
3000	Bellaville, s, l, Peru* (210 shares)	10 0 0	—	—	Fully pd.
30000	Blue Tent, s, l, California	5 0 0	5¼	5 5¼	Fully pd.
50000	Braganza, c, Brazil*†	0 15 0	—	—	Oct. 1870
12000	Camp Floyd, s, l, Utah*	10 0 0	—	—	Fully pd.
25000	Cesena Sulphur Company, Romanga, Italy*	10 0 0	—	—	Fully pd.
60152	Chontales, c, s, Nicaragua*† (and 12,842 of £1 15s.)	2 0 0	7½	7½ 1	Fully pd.
6000	Clifton, s, Colorado*	5 0 0	—	—	Feb. 1872
10000	Crescent, c, Plumas County, California*	10 0 0	—	—	Fully pd.
100000	Culaba, c, Minas Geraes, Brazil*	0 17 6	—	—	June 1872
10000	Douglas, c, Georgetown, Col.	2 0 0	—	—	Fully pd.
7500	East Sheboygan Preference* (4000 ordinary shares)	2 0 0	—	—	Fully pd.
25000	Excelsior Hydraulic Gold Washing Co., California*	6 0 0	—	—	Dec. 1871
60000	Eschequer, c, s, California*	1 0 0	—	—	Fully pd.
85000	Frontino and Bolivia, c, New Granada*†	2 0 0	¾	¾ ¾	Fully pd.
50000	General Brazilian, c*	1 0 0	—	—	Fully pd.
10000	Goetzl Tunnel Co., Georgetown, Col.	7 0 0	—	—	Fully pd.
6000	Holcombe Valley, c, s, California	1 0 0	1½	7½ 1	July 1873
6000	Hornachos, t, l, (210 shares)	9 0 0	—	—	Jan. 1874
30000	Imperial Brazilian Collieries, Brazil*	5 0 0	—	—	Fully pd.
2600	Independence, c, l, California*	5 0 0	3	2½ 3	Fully pd.
20000	I. X. L., c, s, California*	5 0 0	—	—	Fully pd.
12000	Javal, c, Nicaragua*	2 0 0	¾	¾ ¾	Fully pd.
12000	Lancaster, s, l, z, Viscaya, Spain (£2 shares)	1 10 0	—	—	Jan. 1874
65000	London and California, c*†	2 0 0	—	—	Fully pd.
75000	Malabar, c, Colombia* (60000 issued)	1 0 0	¾	¾ ¾	Fully pd.
4000	Malaga, l, Spain*	10 0 0	—	—	Fully pd.
40000	Malpaso, c, Colombia* (10000 pref. shares, ss. paid)	1 0 0	¾	¾ ¾	Fully pd.
12000	Meinenberg, c, Honnef, Germany*	5 0 0	—	—	Fully pd.
14000	Montague & Waverley Gold Quartz Crushing Co., N. Scot.	2 0 0	—	—	Allotment
6000	Monte Loreto, c, s, Italy*	5 0 0	—	—	Fully pd.
15000	New Pacific, c, s, Nevada*	0 7 6	¾	¾ ¾	Jan. 1874
60000	New Quebrada, c, Venezuela*	5 0 0	3½	3½ 3½	Fully pd.
80000	New Rosario, s, Mexico*	1 0 0	1	¾ 1	Fully pd.
30000	New Zealand Kapanga, c, Coromandel*	5 0 0	5	4½ 5	Fully pd.
10000	Newfoundland, s, l	10 0 0	—	—	Fully pd.
20000	North American, c*	4 0 0	—	—	Fully pd.
60000	Panuello, c, l, Chile*	4 0 0	2	¾ 1½	Fully pd.
80000	Pestarena United, c, Italy*	3 0 0	3	¾ ¾	Fully pd.
50000	Rica, c, Colombia* (40000 issued)	1 0 0	¾	¾ ¾	Fully pd.
100000	Rio Tinto, c, l, Huclva, Spain	5 0 0	8½	7½ 8	Jan. 1874
100000	Rosa Grande, c, Brazil*† (£1 shares)	0 19 0	¾	¾ ¾	July 1872
25000	Ruby Consolidated, c, Nevada*	10 0 0	—	—	Fully pd.
30000	Russia, c, Orenburg and Uta*†	10 0 0	3	2½ 3	Fully pd.
25000	Santa Barbara, c, Chile*	2 0 0	—	—	Fully pd.
10000	Santa Barbara, c, Brazil*	2 0 0	1	7½ 1	Mar. 1872
30000	Silver Plume, s, Colorado*	1 0 0	—	—	Fully pd.
17500	Snowdrift, c, Colorado*	2 0 0	—	—	Fully pd.
250000	St. John del Rey *† (45 stock and its multiples can be dealt in)	255	247¾	259¾	"Stock"
26000	St. Lawrence, c, California	5 0 0	—	—	Fully pd.
25000	Star of Nevada, s* (12000 issued)	2 0 0	—	—	Fully pd.
30000	Teocoma, s, Utah*	10 0 0	1½	1 1½	Fully pd.
20000	Thornhill Reef, c, Australia*	1 0 0	—	¾ ¾	Fully pd.
43174	United Mexican, c, Mexico*†	28 7 8	4½	4 4½	May 1868
10000	Utah, c, l, Utah*	5 0 0	1½	1½ 1½	Fully pd.
12000	Yacka, s, Australia, s, South Africa*	5 0 0	—	—	Fully pd.